

FOSTER CITY MARINA FEASIBILITY STUDY

June 1973

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WILLIAMS-KUEBELBECK & ASSOCIATES, INC.

Market Study, Financial Analysis and Implementation Program

KAISER ENGINEERS

Preliminary Engineering Design and Cost Estimates

ROYSTON, HANAMOTO, BECK & ABEY

Site Planning

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I INTRODUCTION

This planning study has been undertaken for the purpose of evaluating the physical and financial feasibility of developing a recreational small craft marina on Belmont Slough in Foster City. Funds for the study have been provided through a planning loan from the State of California Department of Navigation and Ocean Development's Harbors and Watercraft Revolving Fund. The loan was granted in response to a request by the Board of Directors of the Estero Municipal Improvement District, a subsidiary of Foster City and the taxing authority for the City.

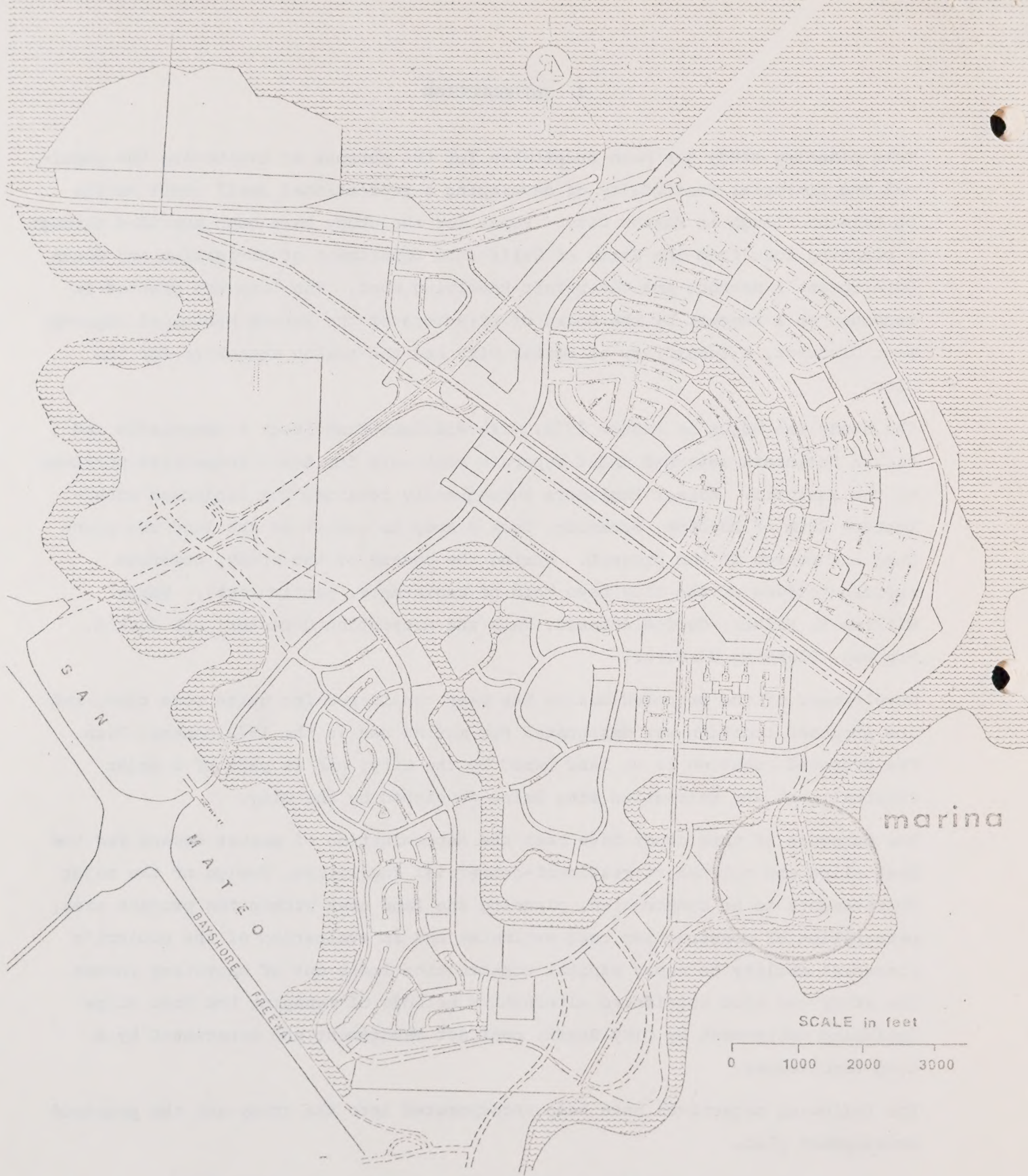
The study was begun in August 1972, with Williams-Kuebelbeck & Associates and Kaiser Engineers retained under separate contracts for their respective portions of the analysis. Kaiser Engineers subsequently retained the landscape architecture firm of Royston, Hanamoto, Beck & Abey to assist in the land use planning and design of the project. During the course of the study, numerous representatives of the City have been of assistance, particularly: Mayor William E. Walker; Gordon Johnson, Park and Recreation Director; and Jack R. Rogoway, Planning Director.

Development of the proposed marina has been considered for quite some time, and the proposed location was designated for marina use in the 1972 General Plan. The proposed location is on land owned by the City, and is part of a major regional park and recreation area being developed by the City.

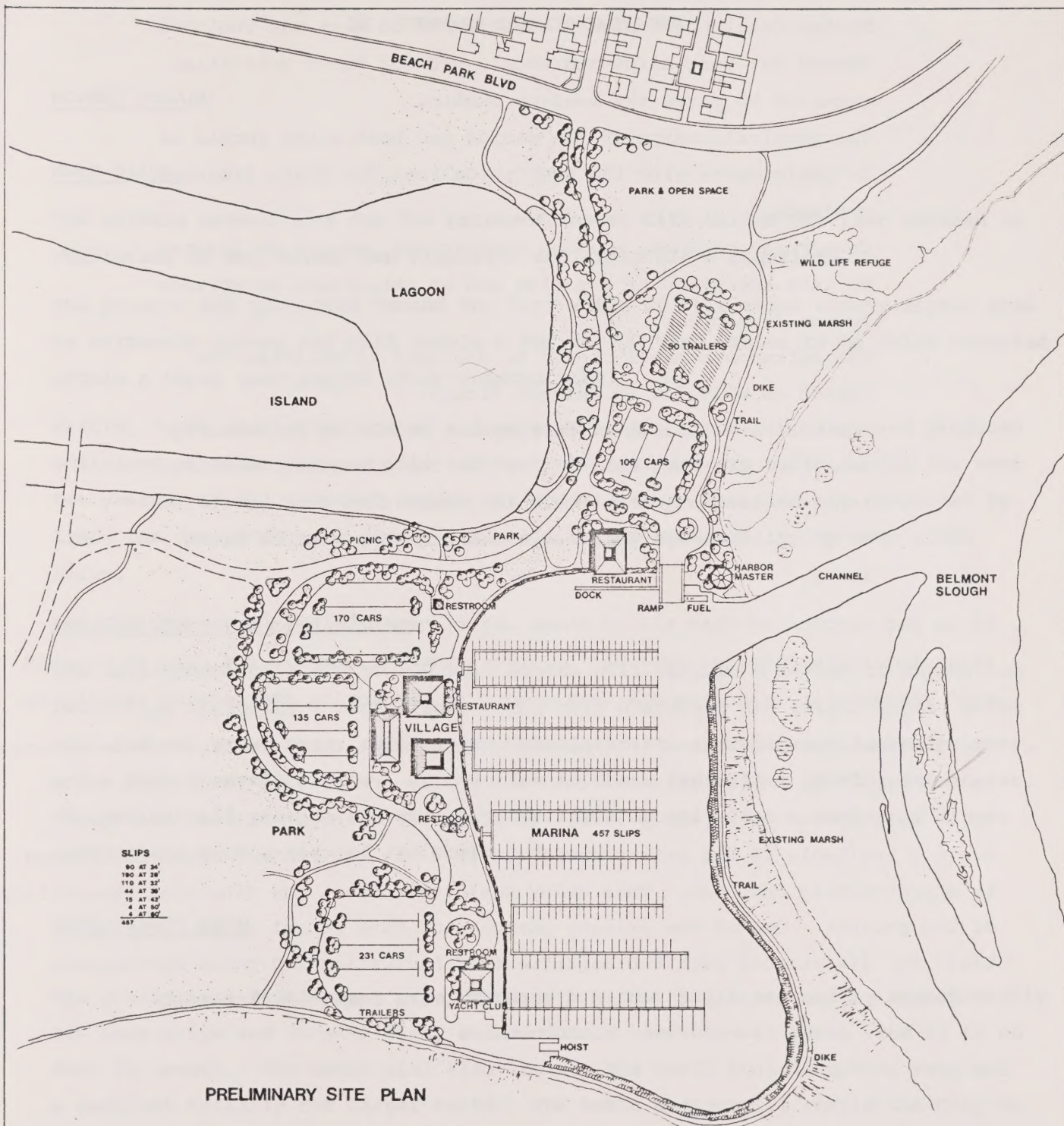
The purposes of this study have been the determination of market demand for the boat slips and related recreational-commercial facilities, design of the major improvements to be constructed, planning the land uses within the project area, preparation of construction cost estimates and an evaluation of the project's financial ability to repay capital construction loans out of operating income. The study has also considered alternative methods of managing the boat slips including management by City Staff, contract management and management by a long term lessee.

The following objectives have been incorporated into the study and the proposed development plan.

- Development of the marina should avoid excessive commercialization and should blend into the adjacent park, recreation and wildlife areas.



LOCATIONAL MAP



FOSTER CITY MARINA FEASIBILITY STUDY CITY OF FOSTER CITY CALIFORNIA

KAISER ENGINEERS OAKLAND

ROYSTON, HANAMOTO, BECK & ABEY
LANDSCAPE ARCHITECTS SAN FRANCISCO

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JUNE 1973

- . Marina development should be designed to meet the regional demand for boat slips and should provide those activities required to serve the boating public.
- . The physical design of the marina and boat slips should be in conformance with the DNOD guidelines for State financed projects.
- . Commercial parcels, such as restaurants, should be located to take advantage of the site and be attractive to private lessee developers.
- . The entrance channel should be designed to minimize the impact on wildlife in Belmont Slough.
- . The plan and phasing of development should be financially feasible under the criteria of the State's harbor construction loan program, and should be financially self-sufficient with regard to operating expenses and repayment of State loans.

It is our conclusion that all of these objectives have been met, and that the basis for implementation provided by this study will enable the City to proceed with the detailed planning and development of the marina and related facilities.

The time schedule contained in this study recommends that construction be started in October 1974, and anticipates that all public and private facilities would be in full operation by early 1978. If State harbor construction loan funds are not available to the extent needed in 1974-75, the project could be delayed by approximately one year. This delay would not affect the financial feasibility of the project. One of the primary purposes of this report is to serve as a basis for discussions with the Department of Navigation and Ocean Development to determine the availability and timing of State loan commitments.

II SUMMARY AND CONCLUSIONS

MARKET DEMAND

Boat Slips

The primary market area for the proposed Foster City Marina has been defined as consisting of San Mateo, San Francisco and Santa Clara Counties.

The present and projected demand for boat slips in this three county market area is extremely strong and will enable a 400 to 500 boat marina to be fully occupied within a three year period after construction.

Waiting lists are quite long at all marinas in the three counties, and proposed additions at other marinas will not meet the need for new slips during the next ten years. If all proposed marina projects in these counties are completed by 1980, the demand for new slips will still exceed availability by over 1,000 slips.

Related Commercial Facilities

The development of a 400 to 500 boat marina will require a number of supporting facilities including a marina fuel dock, ship chandlery and retail store, yacht club and sea scout base, coffee shop, mobile hoist, a small boat launching ramp, and a boat broker's office. In addition to these facilities serving the boater, the marina will provide an extremely desirable location for a number of dinner restaurants with a view of the boats and water.

DEVELOPMENT PLAN

The preliminary development plan proposes a single basin containing approximately 457 boat slips and 20 side ties, accommodating recreational boats from 17 to 60 feet in length. The basin will also include the small boat launching ramp and a haul-out facility for larger boats. The basin design will enable the City to construct a lock between the marina and the internal lagoon system which will not interfere with the marina traffic and activity.

The entrance channel to the marina will utilize the present channel of Belmont Slough, and then enter the northeast corner of the basin. This marina entrance minimizes the impact of boating on the wildlife in Belmont Slough. The channel

at the immediate entrance to the marina and the interior basin walls will be protected by sheet piling or riprap.

The commercial parcels will be clustered on the western side of the marina basin to provide a central point for visitors, and to reduce traffic circulation. Automobile access to the commercial parcels and parking will be from the intersection of Beach Park Boulevard and Cutter Street. Major utility lines will also enter the project area from this same location.

The existing levees on the east and south sides of the basin will be retained in their present state, with pedestrian access along the tops. These levees will provide a barrier between the marina activities and the natural marshlands, and could be developed as wildlife observation paths when the adjoining park is completed.

PHASING OF DEVELOPMENT

Construction of the proposed marina can proceed quite rapidly due to the advantages of the site. A seven month construction program is required to construct the basic improvements, streets and utilities. Construction of site improvements and boat slips can begin as soon as the basic improvements, streets and utilities are installed.

The time schedule suggested in this report calls for engineering design to be completed by July 1974. Construction of basic improvements, streets and utilities would occur between September 1974 and March 1975, at which time the construction of site improvements and boat slips could begin.

This is a most optimistic time schedule, and will require constant, concentrated effort by the City if it is to be achieved. The possibility of a delay in the availability of State loan funds has been recognized and, if it occurs, would shift the entire project schedule by approximately one year.

CONSTRUCTION COSTS

The development program contained in this report suggests that the City assume the financial responsibility for the construction of the entrance channel, marina basin, major road and utilities. The City would then have the option of constructing and managing the boat slips, parking and public restrooms, or

could lease the marina basin and parking area to a private operator who would construct and manage these facilities. In either case, all other commercial parcels would be leased for construction by private operators.

The total construction cost, if the City builds the boat slips, is estimated at \$3.5 million. If the City constructs only the basic improvements, the estimated cost to the City is \$1.9 million, and the lessee's cost is \$1.6 million.

FINANCIAL FEASIBILITY

The financial feasibility of the project has been analyzed to determine if the income to the City will be sufficient to cover all operating expenses and repay the construction loans. Three approaches to development and management have been considered: 1) construction of basic improvements and boat slips by the City, and management of the entire project by City staff; 2) a similar construction program, management of the boat slips by a private operator under contract with the City, and overall project administration by City staff; and 3) construction of basic improvements by the City, with construction and management of the boat slips by a private operator on a long term lease from the City, and overall administration by the City.

The first two approaches are equally desirable from the financial viewpoint and provide similar annual operating surpluses after the project is fully developed. Both approaches result in a nominal surplus during the first three years of operation. Thus, the decision to operate the boat slips by City staff or contract management is a policy choice.

The third approach is also feasible with regard to covering expenses and loan repayments out of operating income. However, this method of construction and management results in a break-even situation during the first five years of operation and produces significantly lower annual surpluses to the City than if the City constructs the boat slips. Furthermore, the private operator may find it necessary to charge higher slip rents in order to cover his higher financing costs, depreciation, property taxes and profit. This approach does have certain advantages in that it reduces the City's capital construction and operating costs, and enables the slips to be taxed as real property under the concept of possessory interest as described in the next paragraph.

ADDITIONAL PROJECT BENEFITS

In addition to the obvious public recreation benefits and the direct financial benefits described in this report, the proposed marina will provide indirect benefits to the City, County and other taxing districts in which it is located.

The initial indirect benefit will result from employment in the construction of the \$3.5 million marina and boat slips, and the construction of another \$2.0 to \$2.5 million in lessees improvements to the commercial parcels. After completion of the construction, the project will continue to employ over 100 people in the operation of the marina and commercial activities.

A second indirect benefit will result from the increased sales taxes generated by the commercial facilities.

Finally, property taxes will be levied on all improvements owned by private lessees and on the boats berthed at the marina. Possessory interest taxes will be levied on the assessed land value of all parcels leased from the City by private lessees. The concept of possessory interest taxation places public property on the tax rolls when the property is leased by an individual or corporation. In the early years of the lease, the property is valued almost as high as if it were owned in fee. The value is reduced gradually as the remaining term of the lease declines.

III MARKET ANALYSIS

INTRODUCTION

The objective of the market analysis is to determine the potential demand for additional boat slips and commercial recreation facilities at the Foster City Marina. The commercial recreation facilities considered include: marine fuel dock; small boat hoist; ship chandlery; dry storage for small boats; restaurants and coffee shops. The demand for specialty retail shops and motels, potential land uses at a large marina, are not considered. This is in keeping with the City's policy of limiting development in the area to recreational facilities and marina supporting activities.

Determination of the demand for boat slips and commercial recreation facilities is an essential basis for planning the development of the marina. In addition, the market analysis is necessary for scheduling the land and water area development and for estimating the income and expenses of the proposed facilities. Financial planning, incorporating the results of the market analysis and engineering studies, is presented in Chapter V.

Much of the information used in this market study was developed during a recent study for the expansion of the Coyote Point Marina. ^{1/} A number of factors permit the direct use of this information. First, the two marinas would serve the same function of providing berthing facilities for recreational small craft. Second, the Foster City Marina is approximately 5 miles from Coyote Point, and serves the same market area. Third, the proposed development plans for marinas in the area, identified in the Coyote Point study, describe the potential future supply of boat berths in the market area. No new development plans have been announced.

Certain new information has been obtained during the course of this study, and is included herein. This information includes the tabulation and analysis of boat ownership records, including length, county of ownership and county where the boat is berthed or stored.

^{1/} Coyote Point Marina Feasibility Study, prepared by Koebig & Koebig, Inc. with the assistance of Williams-Kuebelbeck & Associates and Cooper, Clark & Associates, for the San Mateo County Department of Parks and Recreation, February 1973.

THE MARKET AREA

The effective primary market area for the Foster City Marina is defined as the three counties on the Peninsula: San Mateo, San Francisco and Santa Clara. Initially, the nine counties surrounding San Francisco and San Pablo Bays were considered for inclusion in the market area. However, a field survey conducted in 1970 as part of the Pillar Point Harbor Feasibility Study ^{1/} indicated that over 95 percent of boats berthed in Peninsula harbors were owned by Peninsula residents. A summary of this survey is shown in Table 1. The Coyote Point and Oyster Point Harbor masters' records, as of July 1972, also indicated that over 95 percent of the owners of boats currently berthed at these marinas and those on the waiting lists reside in the three-county market area.

During the course of this study, we obtained a complete list of all boats registered in fourteen counties around San Francisco Bay, Monterey Bay and the Sacramento-San Joaquin Delta. This information included the length of boat, county of registration and county where the boat was berthed or stored as of December 1972. A computer tabulation of the data indicated that 94.7 percent of the boats 22 feet or longer, berthed or stored in the three-county market area, were owned by market area residents.

Alameda, Marin and Contra Costa Counties provide a small secondary market demand for boat slips on the Peninsula. Potential demand from these counties has not been included in the projections since an excess of slips in Alameda and Marin, relative to their boat ownerships rates, enables most boat owners to berth their boats near their residence. Santa Cruz County residents, with close access to Monterey Bay, would not be expected to berth their boats on the Peninsula in any significant numbers.

In addition to this secondary market a small number of residents of more distant counties and other states might be interested in berthing at new marinas on the Peninsula. However, the demand from these areas is unpredictable for planning purposes, and is not included in the projections.

^{1/} Koebig & Koebig, Inc., Pillar Point Harbor, Development Feasibility Study;
for San Mateo County Harbor District, July 1970.

TABLE 1
LOCATION OF OWNER'S RESIDENCE:
BOATS BERTHED OR LAUNCHED AT MAJOR HARBORS, 1970

	<u>Slips</u>	<u>Launching Ramp</u>
<u>San Mateo County</u>		
Coyote Point	72% San Mateo	95% Peninsula
	26% Santa Clara	5% East Bay
	1% East Bay	
	1% Out-of-State	
Oyster Point	99% Peninsula	100% Peninsula
	1% Marin	
Redwood Municipal	90-95% San Mateo-Santa Clara	
	5-10% San Francisco-East Bay	
Redwood Marina	Mostly Peninsula	
Pete's Harbor	Mostly Peninsula	
<u>Santa Clara County</u>		
Palo Alto	90-95% Peninsula	100% Peninsula
	5-10% East Bay	
Alviso	95% Peninsula	100% Peninsula
	5% East Bay	
<u>San Francisco County</u>		
San Francisco Yacht Harbor	100% San Francisco	
<u>Santa Cruz County</u>		
Santa Cruz Harbor	40% Santa Cruz	60% Santa Cruz
	47% Santa Clara	
	3% East Bay	
	10% Monterey/Inland	
<u>Monterey County</u>		
Moss Landing Harbor	85%-95% Monterey/Santa Cruz	
	5-15% Santa Clara	

Peninsula = San Francisco, San Mateo and Santa Clara Counties.
 East Bay = Alameda and Contra Costa Counties.

Sources: Estimated by Harbormasters in Field Survey. Koebig & Koebig, Inc. Pillar Point Harbor, Development Feasibility Study: for San Mateo County Harbor District, July 1970.

POPULATION AND INCOME IN THE MARKET AREA

Between 1960 and 1970, population in the three-county market area increased from 1,833,000 to 2,338,000; an increase of 27.5 percent. The greatest numerical increase and rate of increase occurred in Santa Clara County, where 424,000 persons were added. San Mateo County added 107,000 residents during the 1960-70 interval, and San Francisco County declined 26,000 in population. The population figures for each County in 1960, 1965 and 1970 are shown in Table 2.

A population increase of 813,000 persons between 1970 and 1990 is projected for the market area. San Mateo County is expected to add about 121,000; Santa Clara County 692,000; and San Francisco's population is projected to remain the same between 1970 and 1990. Detailed projections for each five-year interval from 1975 to 1990 are also shown in Table 2.

These projections are based on the 1970 Census results and recognize the reduction in the State and local growth rates due to lower birth rates and reduced immigration. Although the birth rate is expected to remain low for the near future, an increased immigration could resume at any time. The projections shown in Table 3 and used in forecasting demand are thus expected to be conservative.

The importance of higher income households to boat ownership is obvious and was evident from the survey conducted for the California Small Craft Harbors and Facilities Plan, completed in 1964.^{1/} The survey indicated that ownership of boats, outboard motors, boat trailers and inboard motor boats increases as family income increases. At the time the survey was conducted, above average boat ownership rates were noted for households having \$7,500 or more annual income. A comparable income category today would be \$10,000 or more annually.

Income growth, like population growth, has been greater in San Mateo and Santa Clara Counties than in San Francisco. The share of households having incomes of \$10,000 or more, as reported in 1970, has increased to 50% or more in San Mateo and Santa Clara Counties, and is just over 30 percent in San

^{1/} Leeds, Hill and Jewett, Inc., California Small Craft Harbors and Facilities Plan, March 1964; for the Division of Small Craft Harbors, Department of Parks and Recreation, State of California.

TABLE 2

POPULATION TRENDS AND PROJECTIONS, PENINSULA MARKET AREA 1960 - 1990

<u>Year</u>	<u>San Francisco</u>	<u>San Mateo</u>	<u>Santa Clara</u>	<u>3 County Market Area</u>
(Figures in Thousands)				
Population:				
1960	742	449	642	1,833
1965	742	517	883	2,142
1970	716	556	1,066	2,338
Projections:				
1975	698	582	1,216	2,496
1980	708	613	1,384	2,705
1985	714	645	1,572	2,931
1990	716	677	1,758	3,151
Numerical Change:				
1960-65	0	+ 68	+ 241	+ 309
1965-70	- 26	+ 39	+ 183	+ 196
1960-70	- 26	+ 107	+ 424	+ 505
1970-80	- 8	+ 57	+ 318	+ 367
1980-90	+ 8	+ 64	+ 373	+ 446
Percentage Change: (Figures in Percentages)				
1960-65	0.0	+ 15.1	+37.5	+16.9
1965-70	-3.5	+ 7.5	+20.7	+ 9.2
1960-70	-3.5	+ 23.8	+66.0	+27.5
1970-80	-1.1	+ 10.2	+29.8	+15.7
1980-90	+1.1	+ 10.4	+27.0	+16.5

Source: California Department of Finance, Population Research Unit,
Provisional Projection of California Counties to 2000,
 Sacramento, September 1971.

TABLE 3

SHARE OF HOUSEHOLDS HAVING INCOMES OF \$10,000 OR MORE IN 1970:
PENINSULA MARKET AREA

<u>Year</u>	<u>San Mateo County</u>	<u>San Francisco County</u>	<u>Santa Clara County</u>
1962	32.4%	22.6%	25.9%
1965	35.5%	25.3%	28.7%
1968	45.6%	27.5%	47.3%
1970	50.2%	30.5%	50.4%

Source: Sales Management, Annual Surveys of Buying Power

Francisco County (Table 3). At the present time almost one-half of the households in the market area with incomes of \$10,000 or more per year are concentrated in Santa Clara County, about one-fourth in San Mateo County, and one-fourth in San Francisco County (Table 4).

TABLE 4

DISTRIBUTION OF HOUSEHOLDS WITH INCOMES OF
\$10,000 OR MORE IN 1970
PENINSULA MARKET AREA

<u>County</u>	<u>Number</u>	<u>Percent</u>
San Mateo	94,000	27
San Francisco	91,100	26
Santa Clara	165,100	47
	350,200	100

Source: Sales Management, Annual Survey of Buying Power, 1971.

It is evident that future boat ownership potential in the Peninsula market area will be greatest among residents of Santa Clara and San Mateo Counties, the areas of greatest population growth. The increasing household income level in all three market area counties, along with increasing expenditures on recreational activities provide a strong basis for projecting a steady increase in boat ownership.

BOAT OWNERSHIP TRENDS

The best estimate of potential demand for boat berthing facilities will be based on population growth and on the historical increase in boat ownership among the population. This latter factor incorporates the increase in higher income households and the increased expenditures for recreational activity. Estimating boat ownership is a two step process: 1) estimating the total number of boats expected to be owned by residents of the market area in future years, and 2) estimating the number of berthable boats from which the marina will capture its share of patronage for boat slips and support facilities.

Boat ownership rates (the number of boats owned per thousand population) are calculated from the boat registrations for each county. These registration lists, previously published by the California Department of Navigation and Ocean Development and now published by the Department of Motor Vehicles, are considered to be the best available estimates for historical analysis and projection.

Boat ownership growth has varied considerably by county within the market area. In 1962 the boat ownership rate in San Francisco County was 7 boats per 1,000 population; in San Mateo 15; and Santa Clara County 12. By 1970 boat ownership in San Mateo County, reached approximately 20 boats per 1,000 population; Santa Clara County, 19 boats per 1,000 population and San Francisco County, 9 boats per 1,000 population. It is recognized that there may be a saturation point or plateau in boat ownership rates, but that point is not yet well defined. For reference, the ownership rates of selected central and southern California coastal counties in 1970 are listed in Table 5.

It seems reasonable to assume a saturation rate of from 25 to 30 boats per-thousand population. Therefore, we have phased the expected increase within the market area to this level on the basis of a declining rate of increase.

TABLE 5
BOAT OWNERSHIP RATES IN SELECTED COUNTIES: 1970

<u>Market Area Counties</u>	<u>Boats Owned Per Thousand Population</u>
San Mateo	20
Santa Clara	19
San Francisco	9
<u>Other Central and Southern California Counties</u>	
Santa Cruz	22
Monterey	16
Santa Barbara	19
Ventura	19
Los Angeles	14
Orange	22
San Diego	16

Source: Department of Motor Vehicles, Division of Registration, 1970; and 1970 Census of Population.

This is shown in Table 6. Total boat ownership rates in 1990 for each of the counties in the market area are projected as: San Mateo County 27 boats per 1,000 population; San Francisco County 12; and Santa Clara County 28 boats per 1,000 population.

Berthable Registered Boats

All registered boats of 22 feet or more in length are considered to be berthable, that is, their owners would prefer to keep them in a protected slip throughout the year. Certain power boats in the 22 to 26 foot length category, and newer 22 to 26 foot sailboats with retractable keels are designed for trailering. However, the costs of dry storage and the effort involved in launching and hauling out are incentives to berth the boats if slips are available.

Boats in the 17 to 21 foot range are usually considered to be trailerable or suitable for dry storage. However, some owners prefer the convenience of keeping their boats in the water ready for use. Approximately 450, or 16 percent of the slips and ties at harbors in the market area are designed for boats in

TABLE 6

INCREASES IN BOAT OWNERSHIP RATES 1962-1990

	<u>San Mateo County</u>	<u>San Francisco County</u>	<u>Santa Clara County</u>
Estimated Number of Registered Boats Per-Thousand Population			
1962	15.08	6.78	12.42
1970	19.78	8.66	18.85
Increase 1962 - 1970	4.70	1.88	6.43
Average Increase Per Year	.59	.24	.80
Projected Average Annual Increase in Number of Registered Boats Per- Thousand Population			
1970-75	.5	.23	.6
1975-80	.4	.20	.5
1980-85	.3	.15	.4
1985-90	.2	.10	.3
Resulting Ownership Rates, Number of Registered Boats Per-Thousand Population			
1975	22.28	9.81	21.85
1980	24.28	10.81	24.35
1985	25.78	11.56	26.35
1990	26.78	12.06	27.85

Source: Based on Boat Registration Reports of the Department of Motor Vehicles, Division of Registration, Spring 1970; and Division of Small Craft Harbors, 1962. 1970-1990 projections by Williams-Kuebelbeck & Associates.

the 17 to 21 foot range. ^{1/} These slips and ties provide water storage for 6 percent of the registered boats in the 17 to 21 foot range.

The total number of berthable registered boats is, therefore, estimated at 100 percent of boats 22 feet or longer, plus 6 percent of boats in the 17 to 21 foot length range, as shown in Table 7. The number of berthable boats represents 11.5 percent of all registered boats in the market area in 1970. The percentages for the counties in the market area are: San Mateo 12 percent; San Francisco 22 percent; and Santa Clara County 9 percent.

TABLE 7

BERTHABLE REGISTERED BOATS IN THE MARKET AREA: 1970

<u>Length of Boat</u>	<u>San Mateo County</u>	<u>San Francisco County</u>	<u>Santa Clara County</u>	<u>Market Area Total</u>
22' or longer: 100%	1,170	1,240	1,530	3,940
17' to 21' 6%	<u>130</u>	<u>70</u>	<u>210</u>	<u>410</u>
Total	1,300	1,310	1,740	4,350

Source: Boat registration data from Department of Motor Vehicles, Division of Registration, as reported in Peat, Marwick, Mitchell & Co. North Coast Harbor Study, October 1971.

Using the same assumptions, the boat registration data for 1962 indicates that berthable boats were approximately 12 percent of the total registrations at that time. This comparison indicates that the overall length distribution has remained stable over the eight year period. We have therefore projected berthable boats as a constant percentage of total projected boat ownership from 1970 to 1990. The results of this procedure for each county and the market area total are shown in Table 8.

The results of a special tabulation of boat registrations, as of December 1972, are shown in Table 9. This information indicates that the projections to 1975

^{1/} Peat, Marwick & Mitchell & Co., North Coast Harbor Study, report to the U.S. Army Engineer District, San Francisco Corps of Engineers, October 1972; Williams-Kuebelbeck & Associates field survey, July 1972.

TABLE 8

TOTAL REGISTERED AND BERTHABLE BOATS OWNED BY RESIDENTS:1970 AND PROJECTIONS 1975-1990PENINSULA MARKET AREA

	<u>San Mateo County</u>	<u>San Francisco County</u>	<u>Santa Clara County</u>	<u>Market Area</u>
Population Estimate (in Thousands)				Total
1970	556	716	1,066	2,338
1975	582	698	1,216	2,496
1980	613	708	1,384	2,705
1985	645	714	1,572	2,931
1990	677	716	1,758	3,151
Ownership Rate - Total Registered Boats Per- Thousand Population				Average
1970	19.8	8.7	18.9	16.9
1975	22.3	9.8	21.9	18.9
1980	24.3	10.8	24.4	20.6
1985	25.8	11.6	26.4	21.9
1990	26.8	12.0	27.9	22.7
Estimate of Total Registered Boats				Total
1970	11,000	6,200	20,100	37,300
1975	13,000	6,800	26,600	46,400
1980	14,900	7,600	33,800	56,300
1985	16,600	8,300	41,500	66,400
1990	18,100	8,600	49,000	75,700
Berthable Boats as a Percent of Total Regis- tered Boats				Average
1970 - 1990 *	12%	22%	9%	11.5%
Number of Berthable Registered Boats				Total
1970	1,300	1,310	1,740	4,350
1975	1,560	1,500	2,390	5,450
1980	1,790	1,670	3,040	6,500
1985	1,990	1,830	3,740	7,560
1990	2,170	1,890	4,410	8,470

Source: See text for estimating and projection methods.

* Percentages rounded.

as shown in Table 8 are somewhat conservative. Unfortunately, comparable population estimates are not available for December 1972. Thus, the ownership ratio of boats per 1,000 population can not be verified. If the population increases have been as small as anticipated, we would conclude that the ownership rates are rising faster than those projected in Table 8.

TABLE 9
REGISTERED AND BERTHABLE BOATS IN THE MARKET AREA: 1972

<u>Total Registered December 1972</u>	<u>San Mateo County</u>	<u>San Francisco County</u>	<u>Santa Clara County</u>	<u>Market Area Total</u>
<u>Length</u>				
22' or longer	1,403	1,320	1,934	4,657
17' to 21'	2,581	1,096	4,828	8,505
less than 17'	<u>8,548</u>	<u>4,057</u>	<u>17,348</u>	<u>29,953</u>
Total	12,532	6,473	24,110	43,115
<u>Berthable Boats</u>				
22' or longer (100%)	1,403	1,320	1,934	4,657
17' to 21' (6%)	<u>155</u>	<u>66</u>	<u>290</u>	<u>511</u>
Total	1,558	1,386	2,224	5,168
 Berthable Boats as a % of all Registered Boats				
	12.4	21.4	9.2	12.0

Source: Department of Motor Vehicles, Division of Registration, special tabulation as of December 1972.

For planning purposes it is preferable to use the more conservative projection of berthable boats to obtain future demand for berths. The actual count will be used to estimate the current demand relative to the current supply of berths in the market area.

Documented Boats

In addition to boats registered with the State, a small number are documented by the U.S. Coast Guard; boats cannot be both registered and documented. Documented boats are all considered berthable because they tend to be larger boats, five net tons or over, for use in the ocean and international waters. A current listing of the documented boats berthed in the three counties on the Peninsula was obtained from the San Francisco County Assessor. A tabulation of the data indicates that 497 documented boats were berthed at various marinas and harbors in the three county area as of July 1972. Of these, 45 percent were classified as pleasure boats and 55 percent were classified as commercial boats. For our purposes, only pleasure boats have been considered; these are shown in Table 10.

TABLE 10

DOCUMENTED PLEASURE BOATS IN THE MARKET AREA: 1972

<u>County Where Berthed</u>	<u>Number of Documented Pleasure Boats</u>
San Mateo	124
San Francisco	89
Santa Clara	<u>9</u>
Total	222

Source: San Francisco County Assessor's Office, July 1972.

It is assumed that the number of documented boats will increase over the projected planning period at approximately the same rate as registered berthable boats. The estimates for the number of documented pleasure boats shown in Table 11 have been used for purposes of completing the projection of total berthable boats.

TABLE 11

PROJECTION OF DOCUMENTED PLEASURE BOATS IN THE MARKET AREA

<u>Year</u>	<u>Estimate of Documented Pleasure Boats Within the Market Area</u>
1970	200
1975	250
1980	300
1985	350
1990	390

Source: Williams-Kuebelbeck & Associates projection, based
growth rate in registered berthable boats.

SUMMARY OF POTENTIAL DEMAND FOR SLIPS IN THE MARKET AREA

When the projected numbers of registered and documented berthable boats are combined, the resulting figure represents the total demand for boat slips generated by boat owners within the market area. This potential demand is shown in Table 12.

TABLE 12

TOTAL POTENTIAL DEMAND FOR SLIPSIN THE PENINSULA MARKET AREA1970 - 1990

<u>Year</u>	<u>Berthable Registered Boats</u>	<u>Documented Pleasure Boats</u>	<u>Total</u>
1970	4,350	200	4,550
1972	5,170	220	5,390
1975	5,450	250	5,700
1980	6,500	300	6,800
1985	7,560	350	7,910
1990	8,470	390	8,860

Source: Tables 8, 9 and 11

TABLE 13

INVENTORY OF EXISTING AND POTENTIAL RECREATIONAL BERTHING FACILITIESPENINSULA MARKET AREA

	<u>Present Capacity 1972</u>	<u>Potential Additions 1973-1975</u>	<u>Total Anticipated 1975</u>	<u>Potential Additions 1976-1980</u>	<u>Total Anticipated 1980</u>
<u>San Mateo County</u>					
Coyote Point Yacht Harbor	463	-	465	730	1,195
Oyster Point	290	-	290	250	540
Redwood City Municipal	200	-	200	-	200
Redwood Marina	140	-	140	-	140
Pete's Harbor	195	100	295	-	295
Foster City	-	-	-	450	450
Pillar Point	-	-	-	500	500
Total	1,290	100	1,390	1,930	3,320
<u>San Francisco</u>					
San Francisco Yacht Harbor	690	-	690	-	690
St. Francis Yacht Harbor	500	-	500	-	500
Small Private Marinas	160	-	160	-	160
Total	1,350	-	1,350	-	1,350
<u>Santa Clara County</u>					
Palo Alto	220	-	220	-	220
Alviso Harbor	80	-	80	-	80
Total	300	-	300	-	300
Market Area Total	2,940	100	3,040	1,930	4,970

Source: Williams-Kuebelbeck & Associates, Field Surveys, June-July 1972.

EXISTING AND PROPOSED SUPPLY OF BERTHING FACILITIES

An inventory of market area berthing facilities and launch ramps was conducted in June 1972 and updated in March 1973. The results of this inventory show that the number of slips and ties for pleasure boats in the market area was 2,940 (Table 13). At that time a record was also made of proposed additions to these facilities expected to occur before 1975, plus any possibility of increased capacity during 1976-1980. For the most part, planning information was not available for development after 1980; however, it is recognized that some expansion could occur shortly thereafter.

Among the potential areas for slip additions in the early 1980's are: Pillar Point Harbor; the San Francisco waterfront; the City of Belmont; Redwood Shores; and along Redwood Creek. With the exception of Pillar Point, other marina development plans are not firm enough to be quantified.

Recent concern for the environmental impacts of marina projects, rising costs of construction and the extensive physical, financial and environmental feasibility study requirements are expected to preclude any earlier development than that shown in Table 13. Thus, we have projected a total addition of 2,030 slips during the 1972-1980, and a total of 4,970 slips in the market area in 1980.

COMPARISON OF DEMAND AND SUPPLY OF BOAT SLIPS

When the demand for boat slips (Table 12) is compared with the supply in the market area (Table 13), the need for new marina development is immediately evident. This comparison, shown in Table 14, indicates an excess demand of 2,450 slips at present, increasing to 2,660 slips by 1975.

TABLE 14
COMPARISON OF DEMAND AND EXISTING AND PLANNED SUPPLY
OF BOAT SLIPS IN THE MARKET AREA

	<u>1972</u>	<u>1975</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>
Demand	5,390	5,700	6,800	7,910	8,860
Supply	<u>2,940</u>	<u>3,040</u>	<u>4,970</u>	<u>5,470</u>	<u>5,470</u>
Excess Demand	2,450	2,660	1,830	2,440	3,390

Source: Tables 12 and 13.

Note: (1) 1985 supply includes the addition of 500 slips at Pillar Point; detailed expansion plans at other proposed marinas beyond 1980 cannot be quantified at present.

However, this demand estimate must be modified on the basis of berthing or storage preferences on the part of market area boat owners. The data in Table 15 shows the geographic locations in which market area boat owners berthed or stored their boats as of December 1972. It is reasonable to assume that boat owners who keep their boats at some distance from their home do so by choice rather than because of a shortage of berths or storage space.

The counties considered in our special tabulation include those around San Francisco Bay, the Delta, and Monterey Bay. Market area boats kept in the Delta counties of Sacramento (3.1%), San Joaquin (1.6%) and Solano (1.2%) are assumed to represent preferences by market area boat owners for Delta boating. Boats kept in Contra Costa County (12.3%) are also oriented toward the Delta, since the vast majority of marinas in Contra Costa County are located east of Carquinez Straights and do not have immediate access to the Bay. Boats kept in Napa (0.5%) and Sonoma (0.1%) Counties are also assumed to be located there by choice. The same assumption applies to boats kept in other California counties (3.7%). These berthing and storage locations indicate that 22.5 percent of market area boats are kept outside the market area because of the owner's preferences for boating activity in these locations.

Of the remaining 77.5 percent of market area boats, 53.6 percent are kept in the market area, 20.7 percent are kept in Alameda and Marin Counties, and 3.2 percent are kept in Monterey and Santa Cruz Counties. The boats kept in market

TABLE 15

BERTHING AND STORAGE LOCATIONS: BOATS REGISTERED BY MARKET AREA OWNERS

<u>County Where Boat is Berthed or Stored</u>	<u>County of Registered Owner Boats 22' in Length or Longer</u>				<u>County of Registered Owner Boats 17' to 21' in Length (6% of Total)</u>				<u>Market Area Boats</u>	<u>Market Area Boats</u>
	<u>San</u>	<u>San</u>	<u>Santa</u>	<u>Total</u>	<u>San</u>	<u>San</u>	<u>Santa</u>	<u>Total</u>	<u>Total</u>	<u>Percent</u>
	<u>Mateo</u>	<u>Francisco</u>	<u>Clara</u>	<u>22' or</u>	<u>Mateo</u>	<u>Francisco</u>	<u>Clara</u>	<u>17' to 21'</u>	<u>Berthable</u>	<u>in Each</u>
	<u>County</u>	<u>County</u>	<u>County</u>	<u>Longer</u>	<u>County</u>	<u>County</u>	<u>County</u>		<u>(Registered)</u>	<u>County</u>
San Mateo	795	53	215	1,063	118	2	5	125	1,188	23.0
San Francisco	87	534	35	656	2	38	-	40	696	13.5
Santa Clara	9	1	624	634	1	-	249	250	884	17.1
Alameda	75	121	224	420	1	2	3	6	426	8.2
Contra Costa	144	86	392	622	3	2	7	12	634	12.3
Marin	132	421	85	638	2	6	1	9	647	12.5
Napa	8	1	3	12	6	3	4	13	25	.5
Sonoma	1	1	2	4	-	-	-	-	4	.1
Sacramento	48	34	74	156	2	1	1	4	160	3.1
San Joaquin	16	9	57	82	1	1	1	3	85	1.6
Solano	21	16	22	59	1	1	1	3	62	1.2
Yolo	1	0	1	2	-	-	-	-	2	-
Monterey	5	1	38	44	-	-	-	-	44	.9
Santa Cruz	4	1	111	116	-	-	2	2	118	2.3
Other California	57	40	51	148	18	10	15	43	191	3.7
Out of State	0	1	0	1	-	-	-	-	1	-
Total	1,403	1,320	1,934	4,657	155	66	289	510	5,167	100.0

Source: Derived from Department of Motor Vehicles, Division of Registration, special tabulation as of December 1972.

area marinas can be assumed to represent a decision by their owners to berth or store their boats near their residence.

Boats owned by residents of the market area and kept in Alameda, Marin, Santa Cruz and Monterey Counties represent a combination of choice and necessity. The Sausalito-Tiburon area and the Oakland Estuary are known to be preferred locations because of their access to the most desirable central portion of the Bay and Golden Gate. Santa Cruz and Monterey harbors are also attractive, especially to Santa Clara County boat owners who prefer ocean boating. It is evident that a certain portion of market area boat owners will continue to prefer Marin, Alameda and Monterey Bay harbors.

However, our surveys of harbor masters at market area marinas revealed few vacant berths and extensive waiting lists at all marinas. At San Francisco's public marina, a wait of at least two years is required in most cases before a berth can be obtained. An interview with the San Leandro harbor master indicated that approximately 60 percent of the berths in that marina were occupied by Peninsula owned boats, and that the waiting list contained a high percentage of Santa Clara County residents.

It seems reasonable to conclude that a large proportion of market area boat owners would presently prefer to berth their boats at Peninsula marinas if space were available. In addition, new boat owners will find it extremely difficult to obtain a berth in the Sausalito-Tiburon area, the Oakland Estuary, Santa Cruz or Monterey marinas. With the exception of new slips currently being completed at Santa Cruz, there are no plans for new marinas in these locations. Furthermore, new boat owners in Marin, Alameda, Santa Cruz and Monterey Counties will be adding their names to the already extensive waiting lists. For example, the waiting list at Santa Cruz marina contained 1,404 names, approximately 45 percent of whom listed Santa Clara County addresses.

Based on the berthing patterns shown in Table 15, the general preference for berthing a boat near the owner's residence, and the increasing difficulty of obtaining a berth outside the market area, we estimate that approximately 70 percent of the total market area demand for berths is applicable to market area marinas. A revision of the demand projections in order to reflect this reduced effective demand was considered. However, a survey of boat dealers in the market area indicated their feeling that the difficulty in finding a berth was limiting sales of larger boats. This coincides with the experience of

Southern California where the opening of new marinas stimulated new boat sales far above projections. We, therefore, feel that the demand for slips will support the development of 400 to 500 slips at Foster City as well as slips at other marinas in the market area, as shown in Table 13.

CHARACTERISTICS OF DEMAND FOR BOAT SLIPS AT FOSTER CITY MARINA

The preceding market analysis indicates that 400 to 500 new boat slips could readily be absorbed at Foster City. The rental of new slips would in all probability proceed as fast as new slips could be completed, especially if the expansion received sufficient publicity during the construction period. In planning for the marina expansion two important characteristics of the demand, slip sizes and type of propulsion, must be analyzed in more detail.

Slip Sizes

The most important dimension in slip sizing is the length of berthable boats. A comparison of the length distributions of all registered boats in the market area in 1962 and 1970, shown in Table 16, indicates a small relative increase in boats over 17 feet in length. However, changes in the relative proportions of boats in the berthable lengths were minor, and could be attributed to variations in reporting procedures. On the basis of this information, it is safe to assume that significant shifts toward larger or smaller berthable boats will not occur in the near future.

Table 17 indicates the distribution of berthable boats in the market area. This information is shown as an overall guideline for slip sizing. However, the most detailed estimate of demand for specific slip sizes, shown in Table 18, has been obtained from the Coyote Point Marina waiting list. Since this list is updated every six months, it is a much more accurate indication of demand than normal waiting lists.

The total number of names on the waiting list (330) understates demand as a result of current practices in accepting new names for the list. Residents of other counties are informed that San Mateo County residents will be given preference when slips become available. The number of San Mateo County residents currently on the list, plus new boat acquisitions, tends to discourage residents of other counties from registering.

TABLE 16

DISTRIBUTION OF REGISTERED BOATS BY LENGTH: PENINSULA MARKET AREA1962 & 1970

<u>Length</u>	<u>1962 Number</u>	<u>1970 Number</u>	<u>% 1962</u>	<u>% 1970</u>
12' or less	4,968	9,198	19.5	24.6
13' to 14'	7,958	8,370	31.3	22.4
15' to 16'	6,130	8,870	24.1	23.7
17' to 18'	2,424	5,157	9.5	13.8
19' to 21'	1,005	1,733	4.0	4.6
22' to 25'	1,007	1,709	4.0	4.5
26' to 39'	1,613	2,041	6.3	5.4
40' or larger*	<u>322</u>	<u>381</u>	<u>1.3</u>	<u>1.0</u>
Total	25,427	37,459	100.0	100.0

Source: 1962 Leeds, Hill and Jewett, Inc., California Small Craft Harbors and Facilities Plan; 1970 - Peat, Marwick & Mitchell, North Coast Harbor Study.

* Note: 1962 includes an estimate of 100 documented boats;
1970 includes an estimate of 200 documented boats.

TABLE 17

DISTRIBUTION OF BERTHABLE BOATS BY LENGTH:PENINSULA MARKET AREA: 1970

<u>Length</u>	<u>Number</u>	<u>Percent</u>
17' to 21'	419	9.2
22' to 25'	1,709	37.5
26' to 39'	2,041	44.9
40' or longer	<u>381</u>	<u>8.4</u>
Total	4,550	100.0

Source: Tables 12 and 16.

TABLE 18

COYOTE POINT MARINA WAITING LIST: JULY 1972

<u>Length of Slip Requested</u>	<u>NUMBER</u>			<u>PERCENT</u>		
	<u>San Mateo County</u>	<u>Other Counties</u>	<u>Total</u>	<u>San Mateo County</u>	<u>Other Counties</u>	<u>Total</u>
14' to 22'	24	33	57	16.9	17.5	17.3
23' & 24'	16	25	41	11.3	13.3	12.4
25' & 26'	23	54	77	16.2	28.7	23.3
27' & 28'	12	13	25	8.5	6.9	7.6
29' & 30'	22	19	41	15.5	10.1	12.4
31' & 32'	6	6	12	4.2	3.2	3.6
33' & 34'	8	2	10	5.6	1.1	3.1
35' & 36'	11	5	16	7.8	2.7	4.9
37' & 38'	4	8	12	2.8	4.3	3.6
39' & 40'	9	5	14	6.3	2.7	4.2
41' to 45'	1	7	8	.7	3.7	2.4
46' to 50'	5	8	13	3.5	4.3	3.9
52'	1	1	2	.7	.5	.6
60'	-	1	1	-	1.5	.3
78'	-	1	1	-	.5	.3
Total	142	188	330	100.0	100.0	100.0

Source: Coyote Point Marina Harbormaster's Waiting List; July 1972.

The existing supply of slips of various sizes in Basins 1 and 2 at Coyote Point Marina, and other market area marinas has also been considered in this analysis. A comparison of the existing slip length (Tables 19 and 20) with the Coyote Point waiting list indicates that the waiting list contains relatively higher percentages of boats in the 17 to 22 foot and 23 to 26 foot lengths; relatively smaller percentages in the 27 to 30 foot and 31 to 40 foot length; and approximately the same percentage of over 40 foot lengths.

TABLE 19

DISTRIBUTION OF SLIP SIZES AT COYOTE POINT MARINA: 1972

<u>Length</u>	<u>Slips</u>	<u>Side & End Ties</u>	<u>Total</u>	<u>Percent</u>
17'	20	-	20	4.2
22'	4	61	65	13.7
24'	48	2	50	10.6
26'	42	-	42	8.9
28'	2	-	2	.4
30'	38	-	38	8.0
32'	104	12	116	24.5
40'	106	8	114	24.1
48'	10	-	10	2.1
50'	3	2	5	1.0
64'	<u>12</u>	<u>-</u>	<u>12</u>	<u>2.5</u>
Total	389	85	474	100.0

Note: Side and end ties listed as 22' are useable by boats 22' or less in length; larger side and end ties can also be used by smaller boats.

Source: Coyote Point Harbormaster, July 1972.

Further comparison of the distribution of berthable boats in the market area (Table 17) with the sample distribution of slips in the market area (Table 20) indicates that existing marinas provided berthing facilities in 1970 for approximately 85 percent of boats over 26 feet in length and approximately 45 percent of berthable boats in the 17 foot to 25 foot length. The remaining 15 percent of the larger boats are most likely to be berthed in Marin and Alameda County marinas or Monterey Bay harbors. Many of the smaller boats are also berthed at these marinas, however, a significant number are in dry storage or on trailers.

TABLE 20

DISTRIBUTION OF SLIP SIZES AT PENINSULA MARKET AREA MARINAS1971 SAMPLE

<u>Length</u>	<u>Number</u>	<u>Percent</u>
18' or less	97	4.3
20' to 22'	154	6.9
24' to 26'	471	21.1
30'	654	29.2
32'	120	5.4
34' to 36'	273	12.2
40' to 42'	292	13.0
45'	47	2.1
48' to 50'	41	1.8
60' to 65'	70	3.1
66' or longer	19	.9
Total	2,238	100.0

- Note: (1) Sample includes Coyote Point, Oyster Point; Redwood City Municipal; Redwood (private); Pete's Harbor; Palo Alto; Alviso; and San Francisco Yacht Harbor.
- (2) Includes side ties, end ties and special berths for trimarans.
- Source: Special survey conducted by Williams-Kuebelbeck & Associates for Koebig & Koebig Pillar Point Harbor studies

It is important to note that the lack of slips is a critical deterrent to the purchase of new boats over 26 feet long, since dry storage or trailering of boats this large is impractical if not impossible. This deterrent applies to smaller boats in a lesser degree as the length decreases. Thus, the slip sizing at new marinas could have a significant influence on new boat sales of various sizes and on the boating activity of the public.

The recommended distribution of slip sizes at the Foster City Marina has been based on the overall market area demand and the Coyote Point waiting list. The distribution provides a percentage range rather than a specific number of slips in each size in order to provide for flexibility in planning the slip layout.

TABLE 21
RECOMMENDED SLIP SIZE DISTRIBUTION
FOSTER CITY MARINA

<u>Slip Lengths</u>	<u>Percentage of Total Slips</u>
22 feet	10% to 15%
24 or 26 ft.	30% to 40%
28 to 38 ft.	40% to 50%
40 ft. and over	5% to 15%

Source: Based on Tables 17 and 18.

Note: Berthing facilities for boats 40 ft. in length or longer may require special design consideration.

Means of Propulsion

An additional characteristic of demand for berthing facilities is the estimated numbers of sail and power boats. This information is useful in further estimating fuel consumption and revenue to the marine fuel dock. It also provides an indication of the types of boats expected and draft required for various slip lengths.

The percentages of sail and power boats at a number of market area marinas is shown in Table 22. A more detailed breakdown of the Coyote Point waiting list is shown in Table 23. Comparison of the percentages presently at San Mateo County marinas with the percentages on the Coyote Point waiting list indicates that the composition of the Foster City Marina with regard to power and sail will not change significantly when new slips are developed.

On the basis of this information, we have estimated that the occupancy of the Foster City Marina will be approximately 70 percent sailboats and 30 percent powerboats.

LAUNCHING FACILITIES

Launching facilities for trailerable boats can be provided by launch ramps or hoists. Small boat hoists with a capacity of 3 tons or less are relatively easy to operate and in certain cases are more efficient than a launching ramp.

TABLE 22

MEANS OF PROPULSION: BOATS BERTHED AT PENINSULAMARKET AREA MARINAS: 1972

<u>SAN MATEO COUNTY</u>	<u>% Power</u>	<u>% Sail</u>
Coyote Point	30	70
Oyster Point	70	30
Redwood Municipal	10	90
Redwood Marina	20	80
Pete's Harbor	30	70
County Average	32	68
<u>SANTA CLARA COUNTY</u>		
Palo Alto	40	60
Alviso	75	25
County Average	45	55
<u>SAN FRANCISCO COUNTY</u>		
San Francisco Yacht Harbor	60	40
MARKET AREA AVERAGE	41	59

Source: Williams-Kuebelbeck & Associates, Field Survey, July 1972

TABLE 23

MEANS OF PROPULSION: COYOTE POINT MARINAWAITING LIST: 1972

<u>Length of Slip Requested</u>	<u>% Power Boats</u>	<u>% Sail Boats</u>
17' to 21'	24	76
22' to 25'	24	76
26' to 39'	26	74
40' or longer	45	55
Entire Waiting List	27	73

Source: Coyote Point Harbormaster's Waiting List, July 1972

As shown in Table 24, the market area is served by 23 launching ramp lanes and 8 small boat hoists. The 2 ramp lanes at Pillar Point serve ocean boaters, and the 2 at Parkside Aquatic Park in San Mateo provide access to the Bay only at high tide for shallow draft boats. Thus, there are 19 launching ramp lanes effectively serving Bay boaters with trailerable boats.

Small boat launchings at the Coyote Point Marina have averaged approximately 3,000 per year during the past three years. The annual data show a declining trend; however, this may be due to the difficulty in keeping record of all launchings on weekdays and in the off-season. Discussion with the harbor master indicates that the three ramp lanes are adequate except for a limited number of peak days when sailing and fishing conditions are at their best.

Although market demand for a launch ramp on a fee basis is not expected to justify the cost of construction, we recommend the inclusion of a two lane ramp in the development plan. This ramp would serve the owners of small trailerable boats who would not be expected to rent berths at the marina. Furthermore, we recommend that the proposed yacht club be required to install a small boat hoist on its parcel to serve members and guests on race days. The financial implications of the recommended ramp are discussed in Chapter V.

DRY STORAGE

The demand for dry storage results primarily from trailerable boats in the 15 to 21 foot range. Larger boats are somewhat difficult to launch on a regular basis, and smaller boats can usually be stored at or near the owner's home.

Analysis of boat registration data indicates that there are approximately 16,000 boats in the three county market area in the 15 to 21 foot range. An extremely small proportion of these boats can be considered as potential demand for dry storage at a particular marina. Most owners of trailerable boats prefer to launch at a variety of locations around the Bay, in the Delta and at lakes or reservoirs. Furthermore, it is less expensive to trailer small boats and pay launch fees than to pay dry storage fees averaging close to \$1.00 per foot per month.

TABLE 24

1972 INVENTORY OF LAUNCH RAMP AND SMALL BOAT HOISTSPENINSULA MARKET AREA MARINAS

	Launch <u>Ramp Lanes</u>	Small <u>Boat Hoists</u>
<u>San Mateo County</u>		
Coyote Point Marina	3	-
Oyster Point	2	-
Redwood City Municipal	2	1
Redwood Marina (private)	2	1
Parkside Aquatic Park	2	-
Pete's Harbor	-	1
Pillar Point (Ocean)	<u>2</u>	<u>-</u>
County Total	13	3
<u>Santa Clara County</u>		
Alviso	2	-
Palo Alto	<u>2</u>	<u>1</u>
County Total	4	1
<u>San Francisco</u>		
San Francisco Yacht Harbor	-	1
St. Francis Yacht Club	-	1
China Basin (Public)	2	-
Small Private Marinas	<u>4</u>	<u>2</u>
County Total	6	4
<u>MARKET AREA TOTAL</u>	23	8

Source: California Dept. of Navigation and Ocean Development,
Statistical Summary of Existing Boating Facilities
Inventory, December 1970; Williams-Kuebelbeck & Associates
 Survey, July 1972.

The inventory shown in Table 25 indicates that there is little dry storage space available at marinas in the market area, with the exception of the new spaces at Redwood Marina. The Coyote Point Marina Harbormaster has received numerous requests for storage space, primarily because the marina is well located with regard to fishing areas and has good access to a large portion of the navigable water of the Bay. The Redwood Marina (now known as "Docktown") has experienced a slow increase in occupancy of new dry storage spaces.

TABLE 25

INVENTORY OF DRY STORAGE AT MARINAS IN THE PENINSULAMARKET AREA

	<u>Existing Dry Storage Capacity</u>
<u>San Mateo County</u>	
Coyote Point Marina	-
Oyster Point	60
Redwood City Municipal	60
Redwood Marina (Docktown)	500 *
Pete's Harbor	<u>50</u>
County Total	670
<u>San Francisco</u>	
San Francisco Yacht Harbor	-
St. Francis Yacht Club	20
Small Private Marinas	<u>100</u>
County Total	120
<u>Santa Clara County</u>	
Palo Alto	100
Alviso	<u>-</u>
County Total	100
<u>MARKET AREA TOTAL</u>	890

Source: Department of Navigation and Ocean Development, Statistical Summary of Existing Boating Facilities Inventory, December 1970; Williams-Kuebelbeck & Associates Surveys, August 1972.

* Note: 450 spaces added in August-September 1972; approximately 10% occupied in October 1972

However, dry storage is a relatively low rent and unattractive use for the limited amount of land at the proposed marina, and it is recommended only as an interim use during development. A portion of the yacht club parcel may be used for limited dry storage of members' small boats.

SHIP CHANDLERY

Surveys of a number of marinas and chandleries indicate that expenditures for marine hardware and supplies average over \$200 per boat per year. Sales of

fishing tackle and bait, clothing and gift items can be expected to provide a significant addition to this income. Thus, the total income to the chandlery from boats berthed at the marina and other shoppers could be \$200,000 or more per year.

This volume is adequate to support a small ship chandlery if the expenditures can be captured at the marina. It is, therefore, recommended that a one-quarter to one half acre site be provided for a ship chandlery and nautical retail store.

HAUL OUT FACILITY

A boat repair yard is not recommended due to the park-like setting for the marina. However, a facility for hauling out larger boats for bottom cleaning, painting and minor emergency repairs would be a valuable service for owners of 20 to 40 foot boats in the marina. The only comparable facilities are located in Redwood City at South Bay Boat Works, Redwood Marina and Pete's Harbor; in San Francisco at Allemand Bros.; and in Sausalito or the East Bay.

Most boat owners haul out at least once a year for inspection, bottom cleaning and repainting. In addition, repairs to hulls, rudders and propellers are often required before the boat can be moved to a repair yard.

The recommended facility would consist of a mobile travelift with a capacity of 12 to 20 tons, and a small storage area of 3,000 to 6,000 square feet for 5 to 10 boats at a time. Owners would be charged for use of the travelift and for rental of space on a daily basis. A time limit should be set on use of space, and a high daily rental fee should be charged to discourage storage for a longer time than actually needed for painting or repair. The facility should be carefully managed, and should prohibit major repair or rebuilding.

BOAT SALES

The sale of new boats and the brokerage of used boats is an essential activity at a major marina, and provides a valuable service to boat owners wishing to sell or trade their boats.

Surveys at a number of marinas indicate that gross boat sales volume averages from \$500 to over \$1,000 per year. The actual gross sales volume for a

specific broker is unpredictable, but should range from \$500,000 to \$1,000,000 a year. The potential gross at a 400 to 500 boat marina should be sufficient to support at least one major boat sales operation, requiring a maximum of one-half acre of land for parking, office and display space and a number of slips for floating display.

FUEL DOCK

A marine fuel dock, with pump out facilities for waste disposal, is essential to the proposed marina. The small proportion of power boats in the marina will not require a large volume of fuel sales, and thus the fuel dock should be considered as a service facility rather than a high income operation.

YACHT CLUB

Development of the proposed marina can be expected to stimulate formation of a new yacht club and construction of a clubhouse in the project area. A temporary structure should be permitted until the club has increased its membership to the size necessary for construction of a permanent building.

A one-half to one-acre site should be provided, including parking and dry storage for small boats. The yacht club should be required to install a small boat hoist to avoid congesting the launch ramp on race days. The yacht club facilities should also provide for shared use as a Sea Scout base.

DINNER RESTAURANTS

Dinner restaurants with a view of boats and the water have proven to be extremely successful at marina locations in the Bay Area and in Southern California. The Foster City Marina will provide an exceptional site with regard to view of the Bay, the Marina, the park and surrounding hills. The site is also well located to serve the immediate market area of San Mateo County and visitors from San Francisco, Santa Clara and Alameda Counties.

For purposes of projecting potential restaurant volume at the Foster City Marina, we have considered only the demand generated by San Mateo County residents. Table 26 shows the trend in restaurant sales in San Mateo County from

TABLE 26
SAN MATEO COUNTY RESTAURANT SALES

<u>Year</u>	<u>San Mateo County Restaurant Sales (000)</u>	<u>San Mateo County Population (000)</u>	<u>Restaurant Sales Per Capita</u>
1960	\$ 25,771	449	\$ 57
1961	26,177	461	57
1962	28,138	478	59
1963	30,232	492	61
1964	32,198	503	64
1965	35,989	517	70
1966	38,608	527	73
1967	47,281	541	87
1968	52,664	552	95
1969	56,440	555	102
1970	60,350	556	108
1971	64,154	557	115
<u>PROJECTIONS</u>			
1975	79,152	582	136
1980	99,306	613	162

Source: Restaurant Sales - California State Board of Equalization, Trade Outlets and Taxable Retail Sales, annual reports.

Population - California Department of Finance, Population Research Unit.

Note: 1975 and 1980 restaurant sales based on average annual increase in per capita sales, multiplied by projected population.

Restaurant sales include only establishments serving all types of alcoholic beverages, generally referred to as dinner restaurants.

1960 to 1971. The increased volume over this period is primarily a result of population growth and rising incomes. The rate of increase in per capita restaurant sales has exceeded the rate of inflation, indicating a real increase in expenditures for dining out.

The restaurant sales considered in Table 26 include only those establishments serving food and all types of alcoholic beverages. These are generally referred to as dinner restaurants, however, a significant percentage of their income is derived from lunch and bar sales. A wide variety of establishments is covered,

ranging from coffee shops with attached cocktail lounge up to large first class dinner restaurants.

Projection of sales volume on the basis of population growth and increasing per capita expenditures indicates that total demand in 1975 and 1980 will be \$79.1 million and \$93.3 million, respectively. The average sales for 281 San Mateo County dinner restaurants in 1971 was \$228,300. Inflating this average to 1980 at a 3 percent rate of increase gives an average volume of \$297,900. Thus, the \$99.3 million in total sales in 1980 could support approximately 333 average dinner restaurants or, a potential addition of 52 new restaurants in the County between 1971 and 1980.

The restaurants recommended for inclusion in the Foster City Marina plan are somewhat larger than the average size considered above. Our surveys of over thirty marina and waterfront restaurants show a range from 120 to 480 seats, with annual gross revenue of \$2,000 to \$8,000 per seat. The average size and annual gross sales are 275 seats and \$3,500 per seat. For planning purposes, three restaurants averaging 250 seats and an annual gross income of \$3,000 per seat are suggested. Total volume of the three restaurants by 1980 is thus estimated at \$2,250,000 in current dollars or \$2,936,000 in 1980.

Development of these restaurants and income would require capture of approximately 13 percent of the new restaurant sales volume projected for San Mateo County during the 1975-1980 period. The advantages of the site, lack of competition from other waterfront restaurants, and the new activity at the marina should enable the suggested restaurants to capture this volume without difficulty. As will be noted in a subsequent section covering the financial program, restaurant development would be phased over a number of years. Similar restaurants at other marinas have typically operated at a lower gross income during the first few years. Thus, the projection of three restaurants is a conservative estimate of the marina's potential, and is supported by the fact that a number of restaurant operators have already approached the City to inquire about possible leases.

COFFEE SHOP

A small coffee shop, primarily serving breakfast and lunch, is an essential service at a large marina. The sources of patronage and revenue would be

fishermen, boat owners, and visitors to the Foster City Marina.

The inclusion of a coffee shop in the development program will not infringe on the dinner restaurant potential. Coffee shops generally provide a more casual environment, faster service and a wider variety of meals. In addition to serving the general public, they serve employees of the marina and private lessees.

SUMMARY

The results of the market analysis provide a most favorable outlook for the development of 400 to 500 boat slips and related commercial recreation facilities at Foster City Marina. The most important aspects of the market study for the three county market area of San Mateo, San Francisco and Santa Clara Counties are summarized in the following paragraphs.

At the present time, demand by owners of berthable boats in the San Mateo, San Francisco and Santa Clara Counties' market area amounts to 5,390 boat slips. Our inventory of marinas in the market area provides a count of 2,940 slips, ties and moorings. All marinas are fully occupied, with extensive waiting lists. Over 2,000 berthable boats owned by residents of the three counties are berthed at marinas in other counties or kept in dry storage.

Population growth and increased ownership of boats will raise total demand for boat slips to 6,800 by 1980. If the planned construction of new slips at Pillar Point, Oyster Point, Foster City, Pete's Harbor and Coyote Point are realized, demand will still exceed supply in 1980 by 1,830 boat slips.

The proposed development of Foster City Marina will provide 400 to 500 new slips to be opened to the public during 1975-78. In view of the strong demand, these slips will be occupied shortly after their construction.

Development of the Marina will provide additional revenue from marina services. These include a coffee shop, fuel dock, chandlery, haul-out service, yacht club and boat brokerage.

Full development of the Foster City Marina will also provide an exceptional site for dinner restaurants with a view of the Bay and the Marina. The increasing population in San Mateo County, rising incomes and the trends in dining out

will enable the site to support three new medium-size dinner restaurants. The income to these restaurants will result from the growth in total restaurant and bar sales in San Mateo County, rather than from competition with existing establishments.

IV. PLANNING AND ENGINEERING

SITE DESCRIPTION

Location

The site of the proposed marina is located in Foster City, approximately three miles south of the western terminus of the San Mateo-Hayward Bridge. It is situated on the western side of Belmont Slough about one and one-half miles from San Francisco Bay.

Land

The proposed site is undeveloped land with an average elevation of 102, Foster City datum, bounded on the east and south sides by an existing dike which separates it from Belmont Slough. On the north and west sides the site is bounded by undeveloped land which has been filled to elevation 106. The bowl shaped area is approximately 350 by 1,600 feet, two-thirds of the required space for the proposed marina basin. The underlying soil consists of soft sedimentary deposits.

Adjacent Areas

The 70 acre land parcel adjacent to the west side of the proposed marina is planned to be used as a public park. The area north of the marina is also reserved for parkland, and the area outside of the dike bordering on Belmont Slough is natural marshland. The above described areas are shown in the Site Location Plan included in this report.

Water Access

As shown on the Site Location Plan, the boat access from the marina to San Francisco Bay will be via a cut through the existing dike to Belmont Slough and, thence, north to the Bay.

LAND USE

A brief study was made as to the suitability of the land use of the proposed marina site.

Foster City, with a rapidly expanding population and a limited land area, has need for planned open spaces and public recreational facilities. Construction of a



PRELIMINARY SITE PLAN

FOSTER CITY MARINA FEASIBILITY STUDY CITY OF FOSTER CITY CALIFORNIA

KAISER ENGINEERS OAKLAND

ROYSTON, HANAMOTO, BECK & ABEY
LANDSCAPE ARCHITECTS SAN FRANCISCO

0 100 200 300
FEET
SCALE



JUNE 1973

marina within Foster City will add a valuable recreational resource to the area and open the southern portion of San Francisco Bay to increased usage by Bay Area boat enthusiasts. Establishing a marina at the proposed site will increase the desirability of living in Foster City and will develop a valuable natural resource.

The compatibility of the marina to adjacent areas was examined. The 70 acre parcel west of the marina is reserved for a public park. The park and the marina will complement and enhance each other, each giving added interest to the other. The park will prevent the future construction of living units from walling the marina, giving the marina more openness, sailing breezes and a view of the park. Parking facilities could be shared which should result in a reduction in total surfaced area. The marina will provide the park a point of visual interest. The concept of bringing public access areas directly to the marina shoreline will provide an increased measure of enjoyment to both park and marina users.

To the south and east, the marina will be bound by an existing dike, outside of which are marshland areas and Belmont Slough. The dike, which extends an average of ten feet above the average water surface, will provide an effective screen between the marina activities and the natural marshland. In conjunction with the park and marina, future nature observation paths could be established atop the dikes to enhance the appreciation of the wildlife and natural beauty of the marshlands.

To the north of the proposed marina, additional park land is planned. The access road for the marina will pass through this area. To the northwest is an existing lagoon. A visual corridor will be maintained between this lagoon and the proposed marina in order to unite the two bodies of water.

In summary, use of the proposed site as a marina will provide a land use which will benefit the entire city, will have minimal disturbance to the natural areas exterior to the existing dike, and will conform to the present shore line plan of the Bay Conservation and Development Commission.

PLANNING CONSIDERATIONS

General

The primary consideration in preparing the Preliminary Site Plan was to pro-

vide a safe and convenient anchorage for the spectrum of boats projected in the accompanying market analysis. Secondly, public enjoyment of the marina was considered by the addition of commercial facilities, a yacht club and Sea Scout facilities, by the provision of direct public access to the shoreline, and by relating the plan to the proposed adjacent park. The marina is planned to primarily serve those utilizing the berths provided, although launching facilities and trailer parking will be provided for those who trail their boats.

Areas to be utilized for each activity and the general relationship between these areas are indicated in the Preliminary Site Plan. More detailed site planning will be done within the contract drawing stage.

The existing basin area proposed for the marina has a surface area approximately two-thirds of that required to accommodate the proposed number of berths. Because the existing dike surrounds the area on two sides and it would not be economical or desirable to move the dikes into the adjacent marshlands, the basin area will be expanded to the west by a sufficient distance to provide the needed berthing space.

The western area of the proposed basin is filled to an average elevation of 106. The top six feet or so of this fill can be utilized for dry fill in the proposed park or for other uses. In order to minimize construction costs and yet provide a functional arrangement, the finger piers were extended in the east-west direction to the longest practical limit, approximately 600 feet. With the north-south limits of the existing dike and lagoon, full utilization of the available area results in a berth count of 457. The berth mix established in the economic feasibility section of this report was used with fairway widths designed to suit the various slip lengths. This plan reduces the area required for channels to a minimum. The curving shorelines will provide visual interest and create a natural appearance. The minimum depth of the basin, as recommended by the Department of Navigation and Ocean Development, is eight feet below mean lower low water. This depth has been provided in all berthing areas as well as the internal channel and the access channel.

Launching Facilities

A motorized hoist with a capacity of approximately 3 tons will be provided, adjacent to the yacht club, where it may be utilized for guests during

inter-club races and where trailer parking will be provided. A 2 lane launching ramp with an adequate trailer parking area has been planned in the area north of the basin. This location will provide the most direct access to the Bay, promote ease of control by the harbor master and provide some separation between the general public and those involved with the more structured program of the proposed yacht club.

Fueling Facilities

A fueling dock or float will be provided near the entrance to the marina. The boat pump out station will be located nearby so that wastes can be discharged while the boat is being fueled.

Entrance Channel

The marina entrance channel, from Belmont Slough to the basin, will have a length of 650 feet, a width of 100 feet and a depth of 8 feet. In order to provide sailboat access to the marina without the necessity of tacking into the prevailing west winds, the channel will be placed on a southwest to northeast alignment.

The channel will pass through a marshland area which is reported to be inhabited by shore birds, particularly during the periods of low tide when they are feeding. To keep marsh disturbance due to wave action in this area to a minimum, and to maintain the channel limits, sheet piling will be used in some of the channel length. The piling will extend above high water.

Shore Protection

In order to maintain the north and west basin side slopes in a neat condition, to prevent erosion from waves and surface run-off, with a reasonable investment, the shoreline will be confined by the utilization of sheet piling and riprap. Where the adjacent park and village area abuts the marina, sheet piling will be utilized, and in areas where space is available riprap will be used. The south and west basin shoreline will be surfaced with riprap where required.

Harbor Master's Office

The harbor master's office will be located on the north shore of the basin adjacent to the entrance channel. From this position, it will be possible to maintain visual, audio and radio control over all traffic in the entrance

channel, the fuel dock and the launching ramp. It will provide convenient access from the main approach road for those utilizing the services of the office, and adequate parking will be provided.

Village Concept

It is planned to group the ships chandlery, two of the three restaurants, the coffee shop and bait shop in a village cluster located on the marina shore. This arrangement will invite increased patronage and interest in the various enterprises and should promote ease of circulation and enjoyment of the entire area.

Roadway

A 24 foot roadway is planned to extend from the intersection of Beach Park Boulevard and Cutter to the yacht club area at the south end of the marina. It will curve around the north and west sides of the basin, the final location being determined during the detailed planning phase. In the future, it will extend from the adjacent park to the west to a connection with the existing road system. The portion of the road within the park area will provide access for fire and emergency vehicles.

Parking

In order to reduce the adverse visual impact of a large expanse of asphalt and to reduce walking distances, several smaller parking areas have been planned, each adjacent to the facility which it serves. Some valet parking is contemplated for the restaurant area. When the adjacent public park is completed, some of the marina parking area may be utilized by park users. Additional parking areas could be added with the construction of the public park.

Yacht Club

The proposed yacht club and its related scout facilities are located southwest of the marina in a location slightly remote from other activities. The larger berths are planned to be adjacent to the club where it is likely the owners of the larger boats will congregate. Also, (although the marina is not designed to cater to smaller trailer boats) the area provided for boat trailer parking will be utilized for yacht club races and other events. Overflow trailer parking could be handled on the adjacent park land.

ENGINEERING CONSIDERATIONS

Basin Dredging

An investigation was made to determine the most economical method of excavating the marina basin. The lowest cost appears to be a combination of excavating in the dry and dredging. The upper portions of the western third of the basin consist of an estimated 40,000 cy of granular material which could be used for landscaping in the proposed park or other uses. If park use is intended, the material could be excavated and moved with scrapers. If it is to be used in other local fills, it could be excavated with front end loaders and hauled away in trucks. The softer material below elevation 100 could be most economically excavated with a cutter head hydraulic dredge, or bucket or dragline dredge, which would excavate its way up Belmont Slough from the Bay, through the marina entrance channel and then into the basin. The material would be deposited in bottom dump barges and hauled to disposal grounds, probably at Hunters Point or Alcatraz Island. If the material is highly toxic, current regulations require that it be disposed of in the ocean beyond the 100 fathom depth.

Belmont Slough Dredging

In order to provide boat access from the proposed marina to San Francisco Bay, it will be necessary to dredge Belmont Slough for a distance of approximately one and one-quarter miles. To provide an eight foot deep by one hundred foot wide channel, approximately 80,000 cy of material must be excavated.

Maintenance Dredging

The portion of Belmont Slough adjacent to the east and south sides of the proposed marina was sounded by Foster City personnel in order to determine the extent of dredging required in the slough area if a southern entrance to the marina was chosen. From these soundings, the average annual rate of siltation in the slough was determined to be six inches. If this rate of shoaling is projected for the entire length of Belmont Slough, the marina entrance channel and the marina basin, the average annual rate of siltation for the entire project will be 28,400 cy. The Corps of Engineers is currently sounding the entire length of Belmont Slough from the proposed Belmont Marina to the Bay. These soundings, together with further study during

detailed engineering, will provide a firmer basis for estimating the annual rate of siltation.

Belmont Marina

The Corps of Engineers has recently completed a preliminary study for the City of Belmont for a marina located approximately three miles up Belmont Slough from the proposed marina. If Belmont Slough is dredged for the City of Belmont Marina, it is probable that no additional slough dredging would be required for this project. It is estimated that Belmont Marina will not be completed for at least 30 months, well after the proposed completion date for this marina. However, it may be possible to share the cost of the slough dredging from the Bay to the Foster City Marina with the City of Belmont.

Alternate Entrance to Marina

An alternate southern entrance to the marina was investigated on the basis that it may have minimal environmental impact on the marshlands which lie between the existing dike and Belmont Slough.

A southern entrance to the marina would result in a shorter entrance channel length of 350 feet from the basin to Belmont Slough while the northern entrance would require a channel length of 650 feet. The shorter channel would save 2,300 cy of dredging.

The southern entrance plan has several disadvantages. The average round trip distance that a boat would be required to travel from berth to the Bay and return would be increased by 1.7 miles. Wave action from boat operation would impinge on the 2,000 lineal feet of marshland between the dike and the slough. Also, an additional 24,000 cy of dredging of Belmont Slough would be required as well as maintenance dredging, estimated at 5,700 cy per year.

In summary, it appears that a northern entrance would cause less environmental disturbance and would have a lower construction maintenance cost. The northern entrance was adopted for this feasibility study.

UTILITIES

General

Utilities mains serving the marina and ancillary facilities will originate at the intersection of Beach Park Boulevard and Cutter Street and extend south

to the vicinity of the marina. It may be possible to share the cost of these mains with any future development located between Beach Park Boulevard and the northern boundary of the marina. No allowance has been made in the construction cost estimate for this possible future sharing of utility costs.

Drainage

Primary drainage will be contouring the site. Minimal underground drainage may be required in the commercial development areas.

Water

A 6 inch transite water main with a capacity of 1,000 gpm and a length of 2,400 feet is planned to serve all berths, commercial and support facilities. Fire protection will consist of hose reels placed midway along each finger pier and fire hydrants strategically located throughout the facility. The fire main will run north-south near the west edge of the basin in a utility easement.

Sanitary Sewer

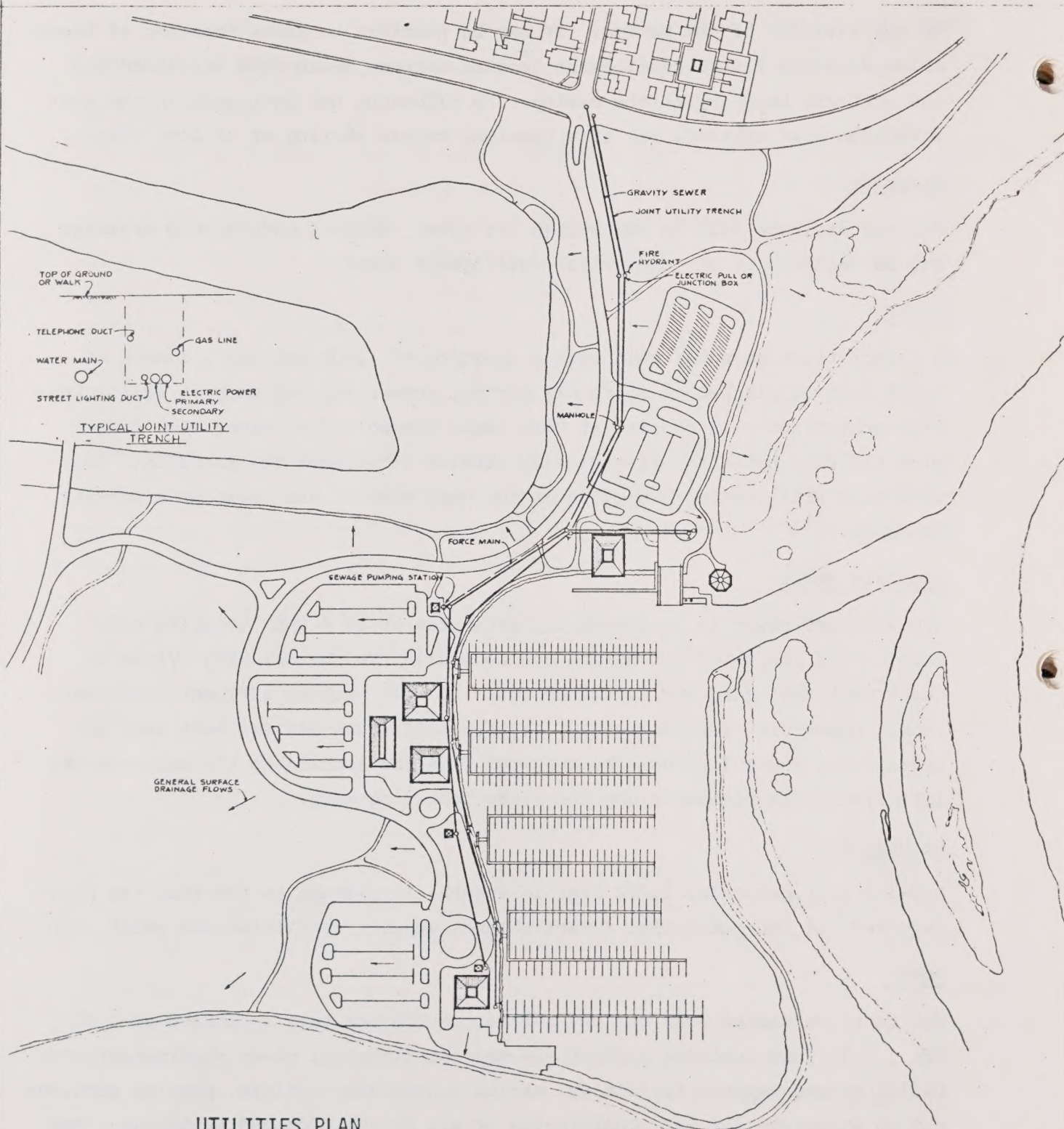
The sanitary sewer is preliminarily estimated as an 8 inch transite pipe running the length of the marina and connecting to the existing system at Beach Park Boulevard and Cutter Street. It will pick up effluent from rest-rooms, commercial establishments, support facilities and the boat pump out station. A force line will be required from the station to the main and one lift station is planned along the 2,800 foot long main.

Natural Gas

A 2-1/2 inch gas main, 2,200 feet in length, is planned to transmit the flow required for the commercial establishment, support facilities and yacht club.

Power

The total connected load for the marina complex has been estimated at 1,400 Kva. This load includes parking and general lighting, power requirements for buildings and support facilities, marina convenience outlets, pumping stations and an allowance for air conditioning of all of the proposed buildings. The cable will be laid underground and transformers, where required, will be pad-mounted.



UTILITIES PLAN

FOSTER CITY MARINA FEASIBILITY STUDY **CITY OF FOSTER CITY CALIFORNIA**

KAISER ENGINEERS

OAKLAND

0 100 200 300



PROJECT SCHEDULE

The Project Schedule indicating the primary activities, and their appropriate time frames, is presented on the following page.

One of the primary constraints to the completion date of the project is the estimated date of the loan grant. From discussions with the Department of Navigation and Ocean Development, the earliest estimated date of loan grant for this project is September 1974, the date planned for start of construction. The schedule assumes that the District will finance the services required prior to the grant date in order that primary construction can be completed by February 28, 1975. Agency review and approval will take a minimum of six months as determined by current Corps of Engineers' practice. It should be noted that the environmental impact study must be completed prior to application for review by the Corps, the Environmental Protection Agency, the State Department of Water Quality Control and others.

COST ESTIMATES

Preliminary Construction Cost Estimate

The preliminary construction cost estimate presented in Tables 27 and 28 based on the following assumptions:

Dredging

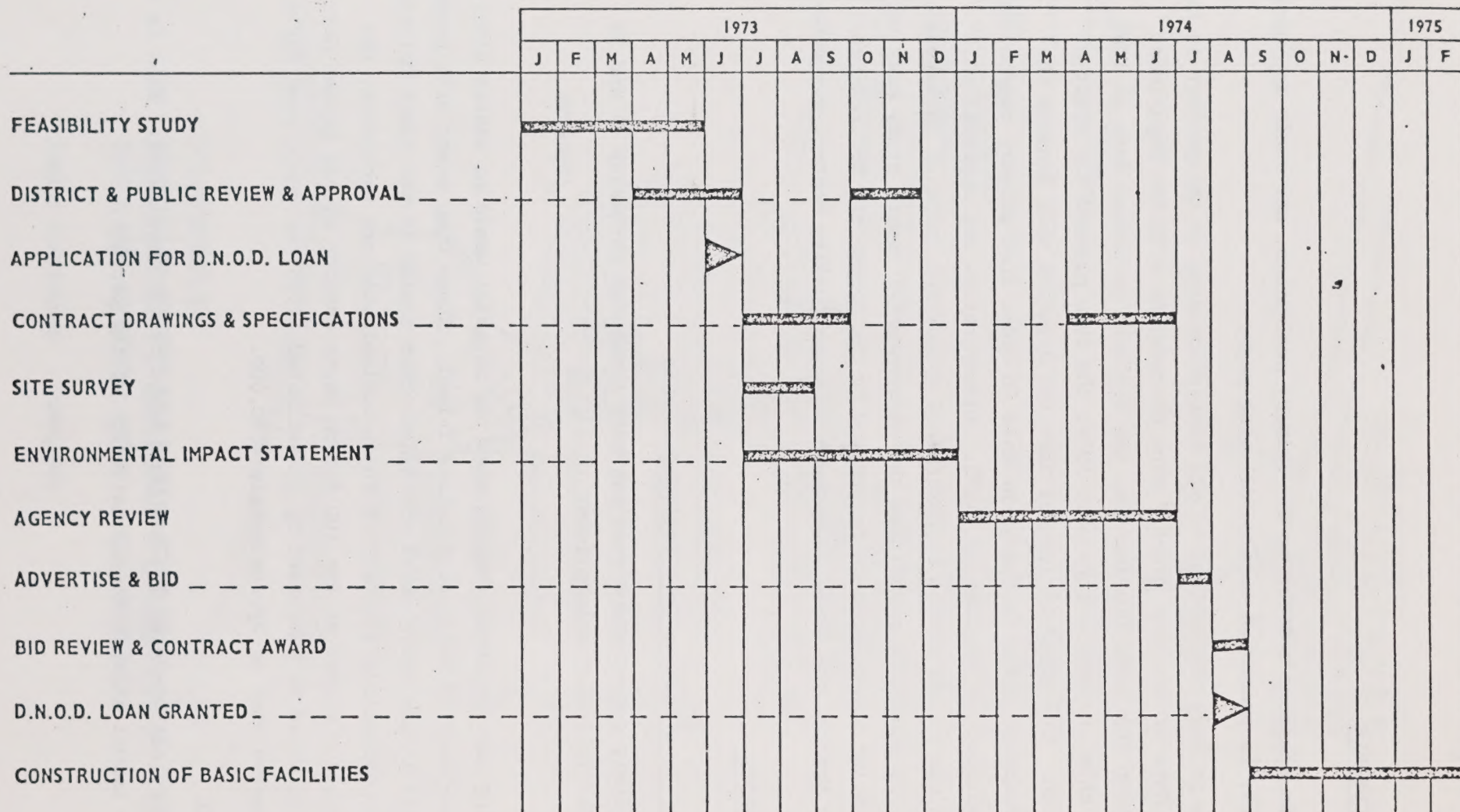
The dredging cost estimate assumes that the material would be wasted within the Bay near Hunters Point or Alcatraz Island. These dump areas will probably be permitted if the heavy metal count and other toxics in the spoil material are within permissible limits. If these contaminants are excessive, the material must be wasted at the 100 fathom depth outside of the Golden Gate and the cost would be increased by an estimated \$1.05 per cubic yard for a total increased cost of approximately \$530,000.

Contingency

A contingency allowance of 15% has been added to all line items. This is a reasonable amount at this conceptual stage of the project.

FOSTER CITY MARINA PROJECT SCHEDULE

56



MAY 31, 1973

KAISER
ENGINEERS

TABLE 27
SUMMARY OF CAPITAL
IMPROVEMENT COSTS

1. Dredging and Excavation	\$ 893,000
2. Slope Protection	190,000
3. Entrance Channel Lining	133,000
4. Slips	1,500,000
5. Utility Mains	140,000
6. Landscaping	265,000
7. Launching Ramp	96,000
8. Mobile Launching Supports	47,000
9. Hoist	10,000
10. Restrooms	55,000
11. Roads and Parking	237,000
12. Lighting	48,000
Total	\$3,614,000
Use:	\$3,600,000

All costs include 15% contingency except cost of slips which include 5% contingency.

Costs of civil facilities are estimated for construction from September 1, 1974, to February 28, 1975. Costs of slips are estimated for installation beginning March 1, 1975.

TABLE 28

CAPITAL IMPROVEMENT COSTS BREAKDOWN

	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u>
<u>1. Dredging and Excavation</u>			
Dredging	460,000 C.Y.	\$ 1.35	\$ 621,000
Dry Excavation	40,000 C.Y.	1.25	50,000
TOTAL			\$ 671,000
<u>2. Slope Protection</u>			
Treated Pile Wall	1,400 L.F.	\$ 102.00	\$ 143,000
<u>3. Entrance Channel Lining</u>			
Steel Pile and Precast Concrete Plank Wave Barrier	1,300 L.F.	\$ 75.60	\$ 98,300
Lighting			1,700
TOTAL			\$ 100,000
<u>4. Slips</u>	457 each	\$ 2,500.00	\$1,142,000
<u>5. Utility Mains</u>			
Electrical - Main Feed	2,200 L.F.	\$ 20.00	\$ 44,000
Power to Sewage Pumps	400 L.F.	10.00	4,000
Gasoline - 2 1/2" Black C&W	2,200 L.F.	5.00	11,000
Water - 6" Transite	2,400 L.F.	2.25	5,400
Fire Hydrants	8 each	500.00	4,000
Sewer - 3" Transite	2,800 L.F.	2.50	7,000
Sewer - 2 1/2" PVC Pressure	200 L.F.	4.00	800
2 1/2" Pump	1 each	1,000.00	1,000
Lift Station - Supply	1 each	10,800.00	10,800
Lift Station - Install	1 job	L.S.	7,000
Manhole - 24"-5' Deep	1 each	L.S.	550
Trenching and Backfill	2,000 C.Y.	5.00	10,000
TOTAL			\$ 105,550
<u>6. Landscaping</u>			
Concrete Walk	15,000 S.F.	\$ 1.25	\$ 13,750
A.C. Walk	8,000 S.F.	0.70	5,600
Landscaping	150,000 S.F.	1.00	150,000
Fine Grading			
Irrigation			
Planting			
Landscape Lighting		Allow	20,000
Miscellaneous Landscape Elements			5,000
TOTAL			\$ 194,350

(continued)

TABLE 28

CAPITAL IMPROVEMENT COSTS BREAKDOWN
(continued)

	<u>Quantity</u>	<u>Unit Cost</u>	<u>Total Cost</u> (000's)
7. <u>Launching Ramp</u>			
Sheet Piling	6,250 S.F.	\$ 1.25	\$ 50,000
Concrete Flatwork	4,200 S.F.	3.50	15,000
Walkways	L.S.		5,000
Extra Work	L.S.		2,000
TOTAL			\$ 72,000
8. <u>Mobile Launching Ramp</u>			
Sheet Piling	3,050 S.F.	\$ 6.70	\$ 20,400
Steel Work	6.5 Tons	1,000.00	6,500
Fittings			1,400
TOTAL			\$ 28,300
9. <u>Hoist</u>			
3 Ton W/Foundation	L.S.		\$ 10,000
10. <u>Restrooms</u> (3 Required)			
Wood	900 S.F.	\$ 16.00	\$ 14,400
	54 each	500.00	27,000
TOTAL			\$ 41,400
11. <u>Roads and Parking</u>			
6" Base Rock - 2" A.C.			
680 Cars @ 400 S.F.	272,000 S.F.		
50 Trailers @ 450 S.F.	22,000		
Roadways - 4,100' x 24'	93,000		
Ramp Area	10,000		
Miscellaneous Area	10,000		
	412,000 S.F.	\$ 0.42	\$ 173,000
Pavement	40,000 L.F.	0.12	4,300
TOTAL			\$ 178,000
12. <u>Lighting</u> - 2' Candles	9 acres	\$ 4,000.00	\$ 36,000

Escalation

The construction cost was estimated in current dollars and escalated for construction to begin in September 1974, using an average annual escalation of 7.5%.

Engineering Cost Estimate

The Estero Municipal Improvement District has at least two options in constructing and operating the marina:

1. Constructing all the facilities shown and operating the marina.
2. Constructing all of the proposed facilities except the finger piers, slips and restrooms.

If option 1 is chosen, the estimated engineering cost will be:

Preliminary Engineering and Preparation of Contract Drawings and Specifications.....	\$ 168,000
Construction Management Services.....	<u>\$ 89,000</u>
TOTAL	\$ 257,000

If option 2 is chosen, the estimated engineering cost will be:

Preliminary Engineering and Preparation of Contract Drawings and Specifications.....	\$ 126,000
Construction Management Services.....	<u>\$ 71,000</u>
TOTAL	\$ 197,000

These estimates are preliminary and will necessarily require review when the scope of the work is more clearly defined.

V FINANCIAL ANALYSIS

INTRODUCTION

The purpose of this section is to evaluate the financial feasibility of the proposed development of the Foster City Marina, and to suggest an appropriate program for funding capital and annual costs for the project. This section includes: a discussion of sources of capital improvement funding; suggested methods of operation of the proposed marina; estimates of operating revenues and expenses; and a determination of the project's financial feasibility. This section also includes a schedule for phasing the construction costs of the public and private improvements described in the suggested development plan, and a schedule of income from these improvements.

ASSUMPTIONS FOR THE FINANCIAL ANALYSIS

It was the expressed objective of the City, at the time this feasibility and development planning study was initiated, to attempt to plan a project which would qualify for a construction loan under the local assistance program of the State Department of Navigation and Ocean Development. It was the primary intent of the City that all public capital costs of the project be raised from the proceeds of such a loan(s). Further, once the harbor was constructed using State loan funds, private leases would be let to private enterprises for the construction, operation and maintenance of certain revenue producing elements planned within an established project area. These elements could include new restaurants, coffee shop, boat sales, boat haul-out, fuel dock, chandlery, boat sales and yacht club. The possibility of construction and operation of the boat slips by private operators was also to be considered in terms of a comparison with financial returns if the City constructed and operated the boat slips. The rentals paid by private lessees, both advanced rentals and annual rentals, would then be used for the City's administration of the project and for repayment of the principal and interest of the State loan(s).

A third method of operation to be considered is the management of the marina by a private operator, under a management contract, after construction of the slips by the City. The private operator would be under the direct control of

the City, on a renewable short term agreement.

SOURCES OF CAPITAL IMPROVEMENT FUNDING

As part of this study, a review of the availability of sources for funding capital costs of the proposed project was undertaken. This investigation covered sources at the Federal, State and local levels of government. A summary of the relevant findings and conclusions of this investigation is presented in the following paragraphs.

State of California Assistance

The primary State programs for assisting local government in planning, acquiring, constructing and improving recreational small craft harbors are administered by the California Department of Navigation and Ocean Development, generally referred to as DNOD. DNOD has programs which provide for harbor planning and construction loans and launching facility grants.

The DNOD program which applies in the case of the proposed Foster City Marina is the small craft harbor construction loan program. Construction loans can be granted for all marina and marina-related improvements within a prescribed project area. Such loans are made for terms not to exceed 30 years at a current interest rate of 4.5 percent annually. In cases where it is required, DNOD will allow up to a five year moratorium on the payment of principal and interest on such loans. The interest payment which would normally be paid over this five year period merely accumulates and is added to the principal. Then, equal payments of principal and interest on the sum of the principal and accrued interest are made in each of the following 25 years. Of course, the loan principal may be repaid prior to the thirtieth year, if desired, without pre-payment penalties. The loan funds are provided from the California Harbors and Watercraft Revolving Fund which receives annual payments from unreclaimed marine fuel taxes paid by the boaters of California.

The security for repayment of these construction loans is the net operating income from revenue producing facilities located within the project area. Therefore, these loans work very much like revenue bonds and hence are not liens against the general credit of the governmental agency involved. The only cases where these loans are a general obligation, without a vote, is where a harbor or port district is involved or where an agency commits supplemental

revenue or tax receipts to repayment. In the case of the Foster City Marina, every effort will be made to cover State loan repayment from net operating revenues from the marina project area.

No other State local agency assistance programs appear appropriate for use in funding capital or annual costs of the proposed Foster City Marina.

Federal Assistance

The basic Federal government programs for local agency harbor improvement assistance is administered by the U.S. Army Corps of Engineers. Authority for the Corps to participate in the development of major navigation projects is in the "commerce clause" of the Constitution. In addition, the Corps has authority for small navigation projects under Section 107 of the 1960 River and Harbor Act, as amended. Under this authority, the Secretary of the Army is authorized to allot funds under certain conditions for the construction of small river and harbor improvement projects without the specific authorization of Congress. The total allotment for small navigation projects may not exceed \$10 million for any one year, and not more than \$500,000 may be allotted for the construction of a project at any single locality. Each small navigation project must be complete in itself, and not commit the Federal government to any additional improvement to assure its successful operation. On recreational navigation projects, the Federal/local funding for those project elements where the Corps can participate is on a 50/50 basis. In the case of development of the Foster City Marina, it does not appear necessary to attempt to utilize either of these Corps' funding programs.

Other Federal financial assistance programs are available to public agencies developing recreation harbors through the Departments of Interior and Housing and Urban Development. The Department of Interior, Bureau of Outdoor Recreation administers a matching grant program for land acquisition and construction of outdoor recreation projects, including marinas. Although the program allows for grants for both land acquisition and improvements, major emphasis is given to land acquisition. The Department of Housing and Urban Development also provides open space grants for recreational projects, primarily for land acquisition. Neither of these programs have been considered as sources of funds since land acquisition will not be required for the development of the marina.

Foster City General Fund

Although development of the marina could be financed partially through use of a General Fund allocation to Parks and Recreation, this approach was not acceptable to the City at the start of this study. As will be described in the remainder of this section, the proposed marina development can be fully self-sufficient using State loans. Therefore, the General Fund has not been considered as a source of financing the project.

POLICIES FOR CONSTRUCTION AND ADMINISTRATION

Three methods of development and operation will be considered in the financial analysis.

1. Construction of all basic improvements by the City and operation of the marina by City employees. Construction would include: the channel and marina basin; boat slips; restrooms; harbormaster's office; slip utilities and major utility lines into the site; slip parking and public parking; landscaping and lighting of public areas; launch ramp; main road through the project area; bulkheads for the travelift and hoist; and grading for private lessees parcels. Private lessees would be required to improve their parcels with landscaping, parking, utility connections, lighting and structures. These parcels would include: restaurants; coffee shops; chandlery; boat sales; yacht club; and fuel dock.
2. Construction by the City, as described above, with operation of the marina by a private operator under a management contract with the City. This approach would maintain City supervision and control, but would require a minimum amount of City employees' time.
3. Construction of the basic improvements by the City, as described above, with the exception of the boat slips, and their utilities, slip parking, lighting and landscaping, restrooms and harbormaster's office. These facilities

would be constructed and controlled by a private operator on a long term lease basis. This third approach reduces the capital expenditure required by the City and minimizes the use of City employees. However, it also provides the least amount of control over the marina by the City.

These three approaches will be evaluated with regard to their financial feasibility in the final portion of this chapter.

OPERATING EXPENSES

Project operating expenses have been estimated for three methods of operation and administration:

1. Administration of the entire project and operation of the marina by City employees, following construction of all marina and land improvements by the City;
2. Administration of the entire project by the City, with a private operating contract for management of the marina, following construction of all marina and land improvements by the City; and
3. Administration of the entire project by the City, with construction of slips, restrooms and slip parking and management of the marina by a private operator on a long term lease, following construction of the channel, marina basin, major utilities and basic land improvements by the City.

The construction and improvement of commercial parcels for restaurants, coffee shop, chandlery, boat sales and yacht club would be the responsibility of their respective operators under each of the three methods described above.

Table 29 presents a summary of estimated operating expenses under each of the three approaches. These estimates are based on a study of recent financial statements for four municipal marinas (Coyote Point, Redwood City, San Leandro, Berkeley) and the Santa Cruz Marina which is operated by a special port district.

TABLE 29

OPERATING EXPENSES *

	City Operation <u>1/</u>	Private Operation <u>2/</u> (short term contract)	Private Operation <u>3/</u> (long term lease)
<u>Salaries & Benefits</u>			
Administration Harbormaster Assistants (3) Secretary	\$42,000	\$36,000	\$36,000
<u>Professional Services</u>			
Accounting Legal Other	12,000	6,000	6,000
<u>Maintenance Materials</u>	6,000	-	6,000
<u>Office Equip. & Supplies</u>	1,000	1,000	1,000
<u>Patrol Boat & Auto Expense</u>	2,000	-	1,000
<u>Telephone & Utilities</u>	12,000	12,000	12,000
<u>Insurance</u>	8,000	1,000	9,000
<u>Other</u>	6,000	3,000	4,000
Marina Operator's Cost	\$89,000	\$59,000	\$75,000
<u>Additional City Costs</u>			
Administration	\$ -	\$ 6,000	\$ 6,000
Accounting, Legal	-	6,000	6,000
Maintenance Materials	-	6,000	-
Patrol Boat & Auto Expense	-	2,000	1,000
Insurance	-	8,000	3,000
Other	-	3,000	2,000
Total City Costs	\$89,000	\$31,000	\$18,000
Total Operating Costs	\$89,000	\$90,000	\$93,000

1/ Includes cost of operating the marina and administration of entire project.

2/ City builds and repairs slips and administers entire project; private operator manages marina only.

3/ Private operator builds slips and manages marina only; City administers overall project.

* In 1973 dollars; assumes full development.

Total operating costs excluding debt service and certain non-recurring expenses at these five marinas were:

Coyote Point	1971-72	\$ 74,100	465 berths
Redwood City	1970-71	31,100	200 berths
San Leandro	1971-72	44,700	308 berths
Berkeley	1971-72	148,500	650 berths
Santa Cruz	1971-72	119,300	306 berths

The range of operating costs per berth was from \$145 at San Leandro to \$228 at Berkeley. Operating costs at Santa Cruz were significantly higher, \$398 per berth, due to the full expense of the special district. We have estimated the operating costs at the Foster City Marina at \$195 per berth, in 1973 dollars. This figure is slightly above the average of the four municipal marinas studied, but reflects the relatively higher operating costs required in the early years. Operating costs at the other marinas have shown a decline relative to revenues over time, and it is anticipated that a similar decline would occur at the Foster City Marina.

The first column of Table 29 shows the breakdown of costs under the first alternative method of operation; total City operating costs are estimated at \$89,000 in 1973 dollars.

The second alternative method of operation, shown in the second column of Table 29, is a new approach to marina management utilizing contract services. Contract services have been used in other governmental functions and, although we have no examples in marina operations, their use appears to be acceptable under close supervision by the City. The cost breakdown for this approach assumes the following.

- Salaries and Benefits and Professional Services.

The City will provide overall administration of the project and be responsible for total project accounting and legal or contractual matters. The contract operator will manage the boat slips only, and be responsible for his own accounting and legal or contractual matters.

- Maintenance Materials.

The City will be responsible for major annual maintenance and repair material costs since these are more of a long-

term capital nature. The contract operator will provide labor for maintenance and repair unless repairs are large scale capital improvement projects such as parking lot repaving or dock replacements.

- Patrol Boat and Auto Expense.

The City will furnish a patrol or work boat, if deemed necessary, and will provide a utility vehicle.

- Insurance.

The City will purchase liability, property damage, fire and theft insurance under a comprehensive policy for the entire project. The contract operator will be required to purchase insurance covering his own staff and operations.

The additional City costs shown in the lower portion of column two reflect the City's involvement in the project over and above the contract operator's management of the boat slips. The City is still fully responsible for the project, and must administer the overall leasing program for all private lessees of the commercial parcels.

The third method of operation requires the least cost to the City, as shown in the third column of Table 29. This approach, which has been tested successfully at Southern California marinas, relieves the City of responsibility for constructing the boat slips, restrooms and parking, and reduces the City's maintenance material, insurance and miscellaneous costs. The City must still administer the overall project and be responsible for all leases and total project accounting. This approach gives the City a minimum amount of control over the boat slips, since the private lessee will not make the capital investment required unless he is relatively free to set his own operating policies and slip rates.

The private operators' costs shown in Table 29 do not include profit or finance charges and depreciation in the case of the lessee who builds the boat slips. These additional costs will be discussed later in this chapter.

CAPITAL CONSTRUCTION COSTS

The construction cost estimates shown previously in the engineering section (Table 28) have been repeated here for reference and calculation of loan

requirements by fiscal year. Table 30 shows the year of expenditure for all capital improvements under the alternative programs of construction of the slips by the City or by a private long term lessee.

Two modifications have been made to the cost estimate: paving costs for parking areas have been reduced to reflect the costs absorbed by private lessees of restaurant and other commercial parcels; and, design fees for slips, restrooms and slip parking have not been included. It is assumed that the slip manufacturer will absorb these costs whether the slips are built by the City or a lessee operator. Inspection of the slip installation may require a small expenditure by the City, but this cost could be included in the City's operating budget.

The \$96,000 cost of the launching ramp has not been included in the loan requirement. The annual debt service on this item would be approximately \$6,000 if it is included in the total loan request, requiring 6,000 launchings per year at a fee of \$1.00 each. In addition, an employee must be available to collect launching fees. Since there are numerous launching ramps and hoists available at other locations on the Peninsula, the ramp would primarily serve the local area and would probably not generate the volume required to pay for its cost. Furthermore, a free launching ramp would be a valuable service to the small boat owner and to younger boaters. We recommend that the City request a direct grant from DNOD for installation of the ramp and allow free use.

Total loan requirements are \$2,027,000 in fiscal year 1974-75 and \$1,500,000 in fiscal year 1975-76 under the alternative of full construction by the City. If the City elects to lease the boat slips to a private operator, the City's total loan requirement is \$1,856,000 in fiscal year 1974-75.

The City's 1974-75 loan requirement is reduced by the lessee's construction of the restrooms and slip parking. Final design and engineering drawings will be required in fiscal year 1973-74 if construction is to begin the following year. The estimated cost of \$126,000 must therefore be incurred before commitment of DNOD loans, and is not eligible for funding according to present DNOD policy.

Principal and interest payments shown in the lower portion of Table 30 are based on the amount which would be required under the current 4.5 percent, 30 year term DNOD loans. The City could elect to begin these payments when they fall due, regardless of project income. However, as will be described later

TABLE 30

CONSTRUCTION COSTS, LOAN REQUIREMENTS AND DEBT SERVICE

<u>CONSTRUCTION COSTS</u> ^{1/}	<u>Year of Construction</u>	<u>City Builds Boat Slips</u>	<u>Private Operator Builds Boat Slips</u>
Dredging & Excavation	1974-75	\$ 893,000	\$ 893,000
Slope Protection	1974-75	190,000	190,000
Entrance Channel Lining	1974-75	130,000	130,000
Slips	1975-76	1,500,000	-
Utility Mains	1974-75	140,000	140,000
Landscaping	1974-75	265,000	265,000
Travelift Supports	1974-75	47,000	47,000
Hoist	1974-75	10,000	10,000
Restrooms	1974-75	55,000	-
Roads & Parking ^{2/}	1974-75	178,000	62,000
Lighting	1974-75	48,000	48,000
Design Fees ^{3/}	1973-74	126,000	126,000
Construction Services ^{3/}	1974-75	71,000	71,000

LOAN REQUIREMENTS ^{4/}

Total Loan Required by City in	1974-75	2,027,000	1,856,000
Total Loan Required by City in	1975-76	1,500,000	-

ANNUAL PRINCIPAL AND INTEREST PAYMENTS BY CITY ^{5/}Construction of Boat Slips by the City

1974-75 Loan:	\$124,400 starting 1975-76
1975-76 Loan:	92,100
Total	\$216,500

Construction of Boat Slips by Private Operator

1974-75 Loan:	\$113,900 starting in 1975-76
---------------	-------------------------------

- ^{1/} All costs in escalated dollars; from Tables 27 and 28.
- ^{2/} Parking costs adjusted down from Table 27 to exclude parking areas paved by private lessees or slip operator.
- ^{3/} Design fees and construction services do not include slip design or installation inspection.
- ^{4/} 1973-74 Design Fees not included in DNOD Loan request.
- ^{5/} DNOD Loans, 4.5% interest, 30 year term; before consideration of delayed repayment provision.

in this chapter, we recommend that the City use the repayment delay provision and avoid a deficit in the early years of the project.

With regard to the schedule of construction expenditure, the projected escalation of costs at 7.5 percent per year is significantly higher than the DNOD interest rate of 4.5 percent. It is therefore financially advantageous for the City to construct the project, including the slips, as rapidly as possible.

OPERATING INCOME

The operating income for the project will be derived from boat slip rentals and the rents from the commercial parcels. No City funds will be required after construction of the basic improvements and boat slips. The following paragraphs describe each projected income source.

Boat Slips

In accordance with the scheduled completion of the marina basin in 1974-75, the first increment of slips can be constructed and occupied in 1975-76. The strong market demand will enable the remainder of the slips to be occupied within three more years. Table 31 shows the projected occupancy of slips, side and end ties. A very low vacancy rate has been projected because of the extremely strong demand and extensive waiting lists at other marinas in the market area. At present, slips in the market area are vacant only long enough to permit a new renter to move his boat into the slip.

Slip rental rates have been estimated at \$1.50 per foot per month in 1975-76, with rent increases of \$.25 per foot every three years. The average rental rate in the market area is presently \$1.25 per foot, with rates at other Bay Area marinas as high as \$1.75 per foot. We feel that the \$1.50 rate is the minimum that could be charged to cover the costs of basin and slip construction, and that the rate increases will be necessary to cover rising operating costs.

If the slips are constructed by a private long-term lessee, the construction schedule may vary somewhat, but the occupancy projections are expected to be similar. Due to the private operator's higher financing costs, taxes, depreciation and profits, it is likely that a higher monthly rental rate would be charged. This would benefit the City to a small extent, since the City would receive a percentage of the lessee's higher gross income.

TABLE 31
INCOME FROM BOAT SLIPS

<u>Fiscal Year</u>	<u>Occupied ^{1/} Slips</u>	<u>Rent per ^{2/} Ft./Mo.</u>	<u>Gross Income</u>
1975-76	100	\$1.50	\$ 54,000
1976-77	300	1.50	162,000
1977-78	450	1.50	243,000
1978-79	470	1.75	296,100
1979-80	470	1.75	296,100
1980-81	470	1.75	296,100
1981-82	470	2.00	338,400
1982-83	470	2.00	338,400
1983-84	470	2.00	338,400
1984-85	470	2.25	380,700

1/ Capacity: 457 slips plus 20 side and end ties.

2/ Average slip length of 30 ft.; rent increased \$0.25 per foot per month every three years.

Fuel Dock

The City's income from the fuel dock is based on a typical charge of \$.015 per gallon of fuel pumped by the operator. An alternative rental charge of 5.0 to 6.0 percent of gross sales, used at certain marinas, would produce approximately the same income to the City. Estimated fuel sales were derived from recent records at Coyote Point Marina, where the ratio of power to sail boats and the number of boats is similar to that projected for the Foster City Marina.

Ship Chandlery

Rental income from the ship chandlery has been estimated on the basis of 5.0 percent of gross sales volume. Sales were estimated at \$200 per boat for paint and varnish, marine hardware, electronic equipment, rigging, outboard motors and miscellaneous gear. In addition, sales income equivalent to \$100 per boat was projected for nautical clothing, decorator items and gifts on the assumption that the chandlery would attract visitors as well as boat owners. This estimating procedure, shown in Table 33, results in a \$40 to \$50 gross sales per

TABLE 32
INCOME FROM FUEL DOCK

<u>Fiscal Year</u>	<u>Occupied Slips</u>	<u>Net Income ^{1/} to City</u>
1975-76	100	\$ 300
1976-77	300	900
1977-78	450	1,400
1978-79	470	1,400
1979-80	470	1,400
1980-81	470	1,400
1981-82	470	1,400
1982-83	470	1,400
1983-84	470	1,400
1984-85	470	1,400

1/ 200 gallons per boat @ \$.015 per gallon net to city.

TABLE 33
INCOME FROM SHIP CHANDLERY

<u>Fiscal Year</u>	<u>Occupied Slips</u>	<u>Income ^{1/} Per Slip</u>	<u>Gross Income</u>	<u>Net Income ^{2/} to City</u>
1975-76	100	-	-	-
1976-77	300	\$328	\$ 98,400	\$4,900
1977-78	450	338	152,100	7,600
1978-79	470	348	163,600	8,200
1979-80	470	358	168,300	8,400
1980-81	470	369	173,400	8,700
1981-82	470	380	178,600	8,900
1982-83	470	391	183,800	9,200
1983-84	470	403	189,400	9,500
1984-85	470	415	195,100	9,800

1/ \$300. per slip in 1973 dollars, escaled at 3.0 percent.

2/ 5.0 percent of gross.

square foot, which is a relatively conservative projection for an attractive retail store.

Boat Sales

Information from boat dealers and brokers at a number of marinas provided a wide range of gross sales volumes for individual dealers. A number of dealers in the Bay Area currently gross well over \$1,000,000 per year through the sale of new boats and brokerage of used boats. We have used an average sales volume of \$1,000 per slip to include both new and used boat sales at Foster City Marina. This provides a relatively conservative gross sales estimate for a single dealer, since the value of 470 new boats averaging 30 feet long, required to fill the marina, would be well over \$7,000,000. The boat dealer at the marina would be expected to capture a significant percentage of these sales in addition to acting as a broker for used boats in the marina.

Typical rental rates for dealers and brokers are 1.0 percent of new boat sales and 10.0 percent of commissions on brokerage. Brokerage commissions average 10.0 percent of sale price, thus a flat rate of 1.0 percent of gross sales has been used to project income to the City in Table 34.

TABLE 34
INCOME FROM BOAT SALES

<u>Fiscal Year</u>	<u>Number of Slips</u>	<u>Sales per ^{1/} Slip</u> \$	<u>Gross Sales</u> \$	<u>Net Income ^{2/} to City</u> \$
1975-76	100	1,061	106,100	1,100
1976-77	300	1,093	327,900	3,300
1977-78	450	1,126	506,700	5,100
1978-79	470	1,159	544,730	5,400
1979-80	470	1,194	561,180	5,600
1980-81	470	1,230	578,100	5,800
1981-82	470	1,267	595,490	6,000
1982-83	470	1,305	613,350	6,100
1983-84	470	1,344	631,680	6,300
1984-85	470	1,384	650,480	6,500

1/ Gross sales of \$1,000 per slip in 1973 dollars, escalated at 3.0 percent per year.

2/ 1.0 percent of gross income.

Haul-Out Facility

As noted in the market study portion of this report, demand for a convenient haul-out facility and limited do-it-yourself space is expected to be quite strong from boat owners at the Foster City Marina and from other Peninsula Marinas. We have estimated gross income on the basis of one haul-out per year for each boat in the marina for bottom cleaning, inspection and minor repair or painting. Bottom cleaning requires only a few hours, whereas certain minor repairs or painting can require up to a week. The average time out of the water is estimated at 2 days, for which the boat owner would pay space rent. The haul-out facility operator could also provide painting services at standard labor rates.

This type of operation with limited space and a limit on the length of time the boat owner can rent space is somewhat different from the typical boat yard. However, most owners of boats over 20 feet long experience considerable inconvenience or difficulty in obtaining the type of services proposed, and would welcome the availability of a new service. A brief financial analysis of the operation, using current haul-out and painting charges, is shown in Table 35. This analysis indicates that the operation should be financially feasible under conservative income and high cost estimates. Income to the City, at 10.0 percent of the operator's gross is projected in Table 36.

Yacht Club

The suggested parcel rent to the yacht club is \$250 per month or \$3,000 per year, plus a 5.0 percent rate on food and bar sales and any income derived from renting the facilities for private parties or banquets. In projecting income to the City, we have used only the flat rate of \$3,000 per year since the policies of the club with regard to other activities are impossible to predict.

Restaurants

As described in the market study section of this report, three restaurants are recommended for the Foster City Marina. Projected income from these restaurants is shown in Table 37, based on an assumed opening of one restaurant a year in fiscal year 1976-77, 1977-78 and 1978-79.

TABLE 35

HAUL-OUT OPERATOR'S FINANCIAL ANALYSISINCOME

Haul Outs: Avg. boat 30 ft. @ \$2.00 per ft.	\$ 60 per boat
Space Rent: Avg. 2 days @ \$5.00 per day	10 per boat
Painting: one paint job per 4 boats @ \$120	<u>30 per boat</u>
470 Haul-outs @ Avg. of \$100.00 per Boat	\$47,000 Gross

OPERATING EXPENSE

Wages & Salaries: Operator & 2 Assistants	\$24,000
Capital Cost: Paving, fencing	
& Lighting	\$ 4,000
Equipment	<u>36,000</u>
	\$40,000
Loan: 80%, 10 yrs. @ 8.0% Interest	4,800
Misc. Equipment & Supplies	5,000
Administrative & Insurance	2,000
Rent @ 10.0% of gross	<u>4,700</u>
Total Expenses	\$40,500
NET INCOME	<u>\$ 6,500</u>

TABLE 36

INCOME FROM HAUL-OUT FACILITY

<u>Fiscal Year</u>	<u>Occupied ^{1/} Slips</u>	<u>Income ^{2/} per Slip</u> \$	<u>Gross Income</u> \$	<u>Net Income ^{3/} to City</u> \$
1976-77	100	109	10,900	1,100
1977-78	300	113	33,900	3,400
1978-79	450	116	52,200	5,200
1979-80	470	119	55,900	5,600
1980-81	470	123	57,800	5,800
1981-82	470	127	59,700	6,000
1982-83	470	130	61,100	6,100
1983-84	470	134	63,000	6,300
1984-85	470	138	64,900	6,500

1/ Slips occupied for one year or more.

2/ \$100 per slip in 1973 dollars, escalated at 3.0 percent per year. See text for method of estimating income.

3/ 10.0 percent of gross.

TABLE 37
INCOME FROM RESTAURANTS

	<u>1976-77</u>	<u>1977-78</u>	<u>1978-79</u>
	<u>\$</u>	<u>\$</u>	<u>\$</u>
<u>Restaurant #1: 250 Seats</u>			
\$2,500 per seat	625,000		
\$3,000 per seat		750,000	750,000
<u>Restaurant #2: 300 Seats</u>			
\$2,500 per seat		750,000	
\$3,000 per seat			900,000
<u>Restaurant #3: 200 Seats</u>			
\$3,000 per seat			<u>600,000</u>
Gross Income (1973 Dollars)	625,000	1,500,000	2,250,000
Escalated at 3.0% per year	683,000	1,688,300	2,608,400
Income to City @ 2.5% of Gross	17,100	42,200	65,200

See text for estimating procedure.

Our surveys of comparable marina and waterfront restaurants indicated that gross incomes ranged from \$2,000 to \$8,000 per seat. The income projections in Table 37 for the first two restaurants are based on gross incomes of \$2,500 per seat in the first year of operation and \$3,000 per seat in the second year. The third restaurant is assumed to gross \$3,000 per seat in the first year of operation. The total income projections for each year, calculated in 1973 dollars, have been escalated at 3.0 percent annually.

Income to the City is based on a rental rate of 2.5 percent of the restaurants' gross annual income. The average lease rate for comparable restaurant parcels is currently 2.5 percent of gross receipts up to \$1,000,000 and 3.0 to 3.5 percent of gross receipts over \$1,000,000. A similar escalation should be included in the new leases. The advantages of the new sites should justify a 3.5 percent rental on gross income over \$1,000,000.

Coffee Shop

Income to the City from the coffee shop parcel is based on a capacity of 100 seats, a sales volume of \$1,000 per seat in 1973 dollars and a rental rate of 2.0 percent of gross sales. Gross sales have been escalated at 3.0 percent per year for projection of future income.

INCOME AND OPERATING EXPENSE SUMMARY

Income and operating expenses for the first ten years of operation are summarized in Table 38 for the three methods of operation discussed previously. The gross income from boat slips is assumed to be the same under each method of operation. However, it is recognized that the private operator who builds the slips might charge a higher rate and increase the gross income. Income to the City from other leases is also assumed to be the same under each method since the City would continue to be the lessor.

Operating expenses for full operation by the City are based on Table 29 and have been escalated at a rate of 4.0 percent per year for fiscal years 1977-78 through 1984-85. The operating expense estimates for 1975-76 and 1976-77 represent arbitrary reductions for these two years before the project is fully developed and leased. We have assumed that certain expenses such as salaries, maintenance materials and insurance will not reach the amount estimated in Table 29 until the project is complete.

The second portion of Table 33 presents the City's operating expenses and net income under the assumption that the City contracts with a private operator to manage the boat slips. The City's direct operating expenses are based on those shown in Table 29, escalated at 4.0 percent per year for fiscal years 1977-78 through 1984-85. An arbitrary reduction of the City's expenses has been made for fiscal years 1975-76 and 1976-77. The slip operator's costs (Table 29) indicate that a payment of 25 percent of gross income from the boat slips will be required to cover his expenses and profit when the slips are fully occupied. It is recommended that a fixed percentage be used for this type of contract rather than a variable cost-plus-fee agreement.

The lower portion of Table 38 presents the operating expenses and the City's net income under the assumption that a private long-term lessee builds and operates the slips. The City's expenses are based on those shown on Table 29, escalated at 4.0 percent per year for fiscal years 1977-78 through 1984-85, with an arbitrary reduction for years 1975-76 and 1976-77.

The lease rates at other marinas where this method of operation is used are typically 20 percent, or more, of gross income from the boat slips. A preliminary analysis of the slip lessees' investment indicates that a rental payment of 20 percent of his gross income may be near the maximum he can afford unless

TABLE 38

INCOME AND OPERATING EXPENSE SUMMARY ^{1/}

	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<u>FULL OPERATION BY CITY</u>										
<u>GROSS INCOME</u>										
Boat Slips	54,000	162,000	243,000	296,100	296,100	296,100	338,400	338,400	338,400	380,700
Fuel Dock	300	900	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400
Ship Chandlery	-	4,900	7,600	8,200	8,400	8,700	8,900	9,200	9,500	9,800
Boat Sales	1,100	3,300	5,100	5,400	5,600	5,800	6,000	6,100	6,300	6,500
Haul-Out Facility	-	1,100	3,400	5,200	5,600	5,800	6,000	6,100	6,300	6,500
Yacht Club	-	-	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Restaurants	-	17,100	42,200	65,200	67,200	69,200	71,200	73,400	75,600	77,900
Coffee Shop	2,100	2,200	2,300	2,300	2,400	2,500	2,500	2,600	2,700	2,800
Total Income	57,500	191,500	308,000	386,800	389,700	392,500	437,400	440,200	443,200	488,600
<u>OPERATING EXPENSE</u>	50,000	75,000	104,100	108,300	112,600	117,100	121,800	126,700	131,700	137,000
<u>NET INCOME AVAILABLE TO CITY</u>										
<u>FOR DEBT SERVICE</u>	7,500	116,500	203,900	278,500	277,100	275,400	315,600	313,500	311,500	351,600
<u>BOAT SLIPS MANAGED BY PRIVATE OPERATOR</u>										
<u>FOR DEBT SERVICE</u>										
City Expense	25,000	30,000	37,700	39,200	40,800	42,400	44,100	45,900	47,700	49,600
Payment to Slip Operator ^{2/}	13,500	40,500	60,800	74,000	74,000	74,000	84,600	84,600	84,600	95,200
Total Expense	38,500	70,500	98,500	113,200	114,800	116,400	128,700	130,500	132,300	144,800
<u>NET INCOME AVAILABLE TO CITY</u>										
<u>FOR DEBT SERVICE</u>	19,000	121,000	209,500	273,600	274,900	276,100	308,700	309,700	310,900	343,800
<u>BOAT SLIPS CONSTRUCTED AND MANAGED BY PRIVATE OPERATOR</u>										
<u>OPERATING EXPENSE</u>										
City Expense	19,500	20,200	21,100	21,900	22,800	23,700	24,600	25,600	26,600	27,700
Income Retained by Slip Operator ^{3/}	43,200	129,600	194,400	236,900	236,900	236,900	270,700	270,700	270,700	304,600
Total Expense	62,700	149,800	215,500	258,800	259,000	260,600	295,300	296,300	297,300	332,300
<u>NET INCOME AVAILABLE TO CITY</u>										
<u>FOR DEBT SERVICE</u>	(5,200)	41,700	92,500	128,000	130,000	131,900	142,100	143,900	145,900	156,300

^{1/} Income is assumed to be the same under each of the three methods of operation.^{2/} Payment to slip operator set at 25.0 percent of income from boat slips.^{3/} Slip operator retains 80.0 percent of income from boat slips.

he raises the monthly slip rates. Thus, if the City were to negotiate a lease at a higher percentage of gross income, the cost would be passed on to the boat owners.

Comparison of the net income available to the City for debt service indicates that there is no significant difference between City operation of the entire project and a private management contract for the boat slips. This reflects our previous assumptions (Table 29) that the total operating costs will be similar under both methods of operation.

The net income available to the City for debt service is significantly lower if the slips are constructed and operated by a lessee. However, the City's capital cost and debt service are also much lower. The following section of this chapter contains an analysis of the financial feasibility of each of the three approaches and an evaluation of their merits.

DEBT REPAYMENT AND PROJECT SURPLUS

The ability of the proposed project to repay DNOD construction loans is the essential criteria for obtaining the loans. Table 30 presents a summary of the loan repayment program and the resulting surpluses after all expenses and loan repayments for each of the three methods of operation. In each case, the net income available for debt service has been taken from Table 38.

Under the first two methods of operation in which the City constructs the boat slips, use of the delayed loan repayment provision is required for the first three years of operation. The debt repayment program has been structured as follows.

1974-75 Loan of \$2,027,000

- 1975-76: no payment.
- 1976-77: payment of full interest and portion of principal due.
- 1977-78: full principal and interest payment.

1975-76 Loan of \$1,500,000

- 1976-77: no payment.
- 1977-78: partial interest payment.
- 1978-79: full principal and interest payment.

TABLE 39

DEBT REPAYMENT AND PROJECT SURPLUS: SUMMARY

	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
<u>FULL OPERATION BY CITY</u>										
Net Income Available for Debt Service ^{1/}	7,500	116,500	203,900	278,500	277,100	275,400	315,600	313,500	311,500	351,600
Principal & Interest Payments on: ^{2/}										
1974-75 Loan of \$2,027,000	0	110,000	133,600	133,600	133,600	133,600	133,600	133,600	133,600	133,600
1975-76 Loan of \$1,500,000	0	0	66,400	99,800	99,800	99,800	99,800	99,800	99,800	99,800
Surplus ^{3/}	7,500	6,500	3,900	45,100	43,700	42,000	82,200	80,100	78,100	118,200
Cumulative Surplus	7,500	14,000	17,900	63,000	106,700	148,700	230,900	311,000	389,100	507,300
<u>BOAT SLIPS MANAGED BY PRIVATE OPERATOR</u>										
Net Income Available for Debt Service ^{1/}	19,000	121,000	209,500	273,600	274,900	276,100	308,700	309,700	310,900	343,800
Principal & Interest Payments on: ^{2/}										
1974-75 Loan of \$2,027,000	14,000	116,000	132,100	132,100	132,100	132,100	132,100	132,100	132,100	132,100
1975-76 Loan of \$1,500,000	0	0	72,400	99,400	99,400	99,400	99,400	99,400	99,400	99,400
Surplus ^{3/}	5,000	5,000	5,000	42,100	43,400	44,600	77,200	78,200	79,400	112,300
Cumulative Surplus	5,000	10,000	15,000	57,100	100,500	145,100	222,300	300,500	379,900	492,200
<u>BOAT SLIPS CONSTRUCTED AND MANAGED BY PRIVATE OPERATOR</u>										
Net Income Available for Debt Service ^{1/}	(5,200)	41,700	92,500	128,000	130,000	131,900	142,100	143,900	145,900	156,300
Principal & Interest Payments on: ^{2/}										
1974-75 Loan of \$1,856,000	0	41,700	92,500	128,000	128,000	128,000	128,000	128,000	128,000	128,000
Surplus or (Deficit)	(5,200)	0	0	0	2,000	3,900	14,100	15,900	17,900	28,300
Cumulative Surplus or (Deficit)	(5,200)	(5,200)	(5,200)	(5,200)	(3,000)	900	15,000	30,900	48,800	77,100

^{1/} From Table 38^{2/} See text for explanation^{3/} Nominal income withheld for operating contingency in fiscal years 1975-76, 1976-77 and 1977-78.

The payment schedule reflects the ability of the project to repay the loans out of operating income without the use of City general fund contributions. In both methods of operation, a nominal amount of income has been retained as a contingency for operating expenses in fiscal years 1975-76, 1976-77 and 1977-78. After 1977-78, the full development of the project produces a substantial annual surplus under both methods of operation. Full operation by the City results in a slightly higher annual surplus than does management of the slips by a private operator. This is primarily due to the mechanics of the calculations, and both methods are considered equally desirable from the financial viewpoint.

Construction and management of the boat slips by a lessee is much less desirable in terms of the project's ability to repay the loans and produce a surplus in the early years, as shown in the lower portion of Table 39. The debt repayment program for this alternative has been structured as follows.

1974-75 Loan of \$1,856,000

1975-76: no payment.

1976-77: partial interest payment.

1977-78: payment of full interest and portion of principal.

1978-79: full principal and interest payment.

The deficit shown for fiscal years 1975-76 through 1978-79 is relatively small, and could be turned into a surplus through increases in any of the major sources of income or through advance rental payments by the slip operator. However, in comparison with the two alternatives involving construction of the slips by the City, this approach is obviously the least desirable from the financial viewpoint.

PRE-CONSTRUCTION EXPENDITURES

The suggested development schedule will require continuous effort by the City in order to achieve the target completion date for the major improvements and opening of the first boat slips in 1975. The following expenditures may be required before DNOD Loan funds become available:

Fiscal year 1972-73	Feasibility Study Loan	\$ 25,000
	Environmental Study	5,000
Fiscal year 1973-74	Engineering, Design	126,000
	Environmental Study	25,000
	Preliminary Leasing Guide	10,000
Fiscal year 1974-75	Leasing Program	<u>20,000</u>
Total:	City Staff and Consultants	\$211,000

Of these potential City expenditures, the 1972-73 feasibility study loan has been received and is to be repaid over the next ten years. The 1972-73 environmental study is currently being prepared by City staff, based on the design shown in Chapter IV of this report. DNOD Loan funds cannot be made available before August 1974. Therefore, the final engineering design and any further environmental studies must be funded by the City during 1973-74 if construction is to begin in September 1974. The leasing program, described in Chapter VI of this report, must also be started in early 1974 and completed in early 1975 if commercial parcels are to be leased in 1975.

These expenditures must be appropriated from the City's General Fund or transferred to the project from some other special fund. Two methods of recovering these expenditures out of project revenues can be used. A separate marina account should be instituted and all costs should be charged to this account. Surplus revenues from the project could then be used to return expenditures to the General Fund. A second approach would be to recover the expenditures out of the first few years' project income, thus delaying repayment of the DNOD loans until the City has recovered its costs. This latter approach will result in slightly higher interest costs over the term of the DNOD Loans, and would require DNOD approval to delay the payments. As will be noted in the next section, DNOD funds may not be available for construction in 1974-75, thus the time schedule for City expenditures may be changed and engineering design costs may be financed by the State.

FINANCIAL SUMMARY AND CONCLUSIONS

The analysis presented in this chapter indicates that the proposed development of the Foster City Marina is a financially feasible project based on the market demand study, estimated construction and operating costs, projected income and

the assumed availability of capital construction loans from the California Department of Navigation and Ocean Development. The projections of income are conservative and appropriate contingencies have been included in construction and operating costs. To the extent that the development schedule can be followed and development costs are reasonably close to the estimates used herein, the project will be self-sufficient with regard to repayment of the proposed State loans.

Two additional sources of income are available for financing the capital and operating costs of the proposed project. These are bonus bids for options on the leases to be let at the harbor, and holding rentals for the leased parcels during the period before completion of lessees' improvements.

The minimum bonus bid, as applied successfully at a number of California marinas, has been set at a portion of the first five years' rental payments on each parcel, with the subsequent rentals reduced accordingly. The advantage to the City would result from having the income available as early as possible and either reducing the State loan required or repaying principal and avoiding interest charges. The lack of marina development opportunities in the Bay Area and the demand for boat slips and related facilities should provide strong competitive bidding for such leases and should result in bonus bids above the minimum requirements.

Holding rents are paid by lessees during the time between award of the lease and the completion of lessees' development. These rents are typically set at one-third to one-half the minimum annual rent due for the parcel.

Both of these sources of income could be realized in the early years of development. If the project proceeds according to the schedule, income from the bonus bids and holding rents could enable the City to begin full repayment of the State loans in 1976-77 and avoid any additional interest accumulation.

Three alternative construction and management approaches have been considered in the financial analysis. In the first, and most common approach, the City would assume responsibility for construction of all basic improvements including the boat slips and would manage the entire project. The second approach differs only in that the City would contract for management of the boat slips by a private operator on a relatively short term, renewable contract. In the third approach, the City would assume responsibility for construction of all

basic improvements, and would then lease the marina basin and adequate parking area to a long term lessee for construction of the boat slips and parking.

The first two approaches require identical capital construction expenditures by the City. The second approach results in a lower direct cost to the City since the slip operator absorbs most of the direct operating expenses. However, when the slip operator's costs and the City's administrative costs are combined, total operating costs are approximately the same under both approaches. Total project income is the same under both approaches and, therefore, they produce approximately the same net income available for debt service. Both methods of operation result in a substantial annual surplus after the project reaches full development.

Construction and management of the boat slips by a private lessee is also financially feasible in terms of repayment of State loans. This approach provides substantially less income to the City after debt service, and would be likely to require higher slip rental rates than if the City constructs the boat slips. However, the City's loan requirements and debt service are also reduced by the private construction of the slips, parking and restrooms.

There are arguments which can be made for construction and operation of recreational small boat harbors, which are financed by government, by both public agencies and private enterprise. With government operation of the boat slips, the rentals boaters are required to pay are generally below the true market price. This is the case which exists now in the Bay Area. In essence, the public agency does not pay property or income taxes nor have to show a profit. Therefore, their pricing should be lower than an operation by private enterprise if both were equally efficient. In this case, however, a very important point to consider is the amount of capital funds required by the City to build the project and the timing of the availability of such funds from DNOD. If the City constructs, operates and maintains the boat slips, approximately \$1.6 million more in capital funds are required than if the City leases the boat slips to a private lessee. If the City constructs, operates and maintains the boat slips, the project will cost approximately \$3.5 million, whereas if a lessee were to assume this responsibility, the City's total project capital cost would amount to approximately \$1.9 million.

Since both approaches have proven satisfactory in other marinas throughout California, and both approaches are financially feasible, as shown in this

analysis, the choice must logically be based on the availability of construction loan funds from the State. If the State is capable of providing \$2.0 million in loan funds to the City in 1974-75 and \$1.5 million in 1975-76 then from a strictly financial viewpoint, the City and the boaters who will pay the City for the use of the slips in the marina will be better off under City construction and operation. On the other hand, if the State is unable to provide the loan funds in the amounts and years requested, the City will be forced to reschedule the project and possibly lease the slips for construction by a lessee.

Preliminary discussions with DNOD indicate that loan funds for construction may be limited to design costs in 1974-75, but that the full construction amount may be available in 1975-76 and 1976-77. The effect would be a delay of one year in the start and completion of the project. However, the financial feasibility of the project would not be diminished in any way.

VI IMPLEMENTATION PROGRAM

The Foster City Marina, as proposed in this report, involves many aspects of development with which the City is familiar. The most significant difference is the complexity of the project on a relatively small site, the short time period for development and the coordination required to produce a successful development. The implementation program is intended to assist the City in carrying out the development task.

The recommendations contained in this section are based on considerable study of California recreational harbors and experience with the problems of developing these harbors. Recreational harbors in California do not have a long history, and the difficulties encountered in several projects indicate that any harbor development should be approached with due concern for the complexity and magnitude of the undertaking.

This study has analyzed all the factors believed to be significant in evaluating the feasibility of development of the Foster City Marina. These have included investigations of the need for facilities, the physical characteristics of the proposed harbor and the related development, planning and siting of required facilities, preliminary engineering and costing of facilities, and testing of the financial feasibility of the development.

In addition, a specific financial program has been outlined which will permit the construction of the proposed improvements on a reasonable basis in accord with the State of California, Department of Navigation and Ocean Development loan program and local resources.

However, analysis of all the factors affecting the development will not guarantee the success of the marina. Aggressive leadership by the City will be essential and the City must include pursuit of a well defined implementation program. The main components of this program are: (1) an action schedule, defining specific actions the City must take at various times in the future, and (2) a leasing program which facilitates the participation of lessees in the project. These components are described in the two following sections.

DEVELOPMENT SCHEDULE

To initiate, conduct, and complete the construction of the improvements proposed for the marina, the City must cause certain specific activities to occur in a sequential manner, and with reasonable adherence to a predetermined time schedule. Each major action to be initiated by the City is briefly described below. The recommended timing of these actions is contained in the following Project Schedule.

It is envisioned that a single design contract for engineering design of public improvements would be awarded. This single contract contains several major functions such as preliminary design, final design and construction administration. Lessee improvements are a separate category, although some of the functions within this category could also be included within the basic design program for public improvements.

From the schedule it may be seen that field work of the preliminary design phase should be begun in fiscal year 1973-74 to allow completion of lessee improvements, and consequently full marina operations, by the end of fiscal year 1978-79. This time frame does not attempt to anticipate delays which might be caused by political or environmental concerns, and is predicated on the prompt availability of financing, and subsequent prompt leasing of all facilities to be privately developed.

It is improbable that the elements of the schedule could be accomplished much sooner than shown because of the inter-relationships of certain key elements in the critical path. The critical path is presently envisioned as being the sequential completion of the following items:

- . Field topographic and hydrographic surveys and foundation investigation.
- . Preliminary plans and specifications.
- . Environmental Impact Statement.
- . Final design of heavy construction.
- . Contractor selection for heavy construction.
- . Construction of heavy construction features.
- . Construction of site improvements and lessee improvements.

PROJECT SCHEDULE

	<u>Started</u>	<u>Completed or Approved</u>
Prepare Environmental Impact Study	June 1973	July 1973
City Approval and Application to DNOD for Loans	July 1973	Aug 1974
Award Engineering Design Contract	Sept 1973	June 1974
Apply for BCDC, WQCB and Corps Engineers Approvals	July 1973	Aug 1974
Award Contract for Public Heavy Construction	Sept 1974	Feb 1975
Award Contracts for Public Site Improvements	Sept 1974	June 1975
Prepare Lease Offer Information and Advertise for Bids	June 1974	Sept 1974
Accept Bids and Award Leases	Dec 1974	Mar 1975
Open First Slips to Public	July 1975	

This is predicated on the fact that the heavy construction need not be completed before the public site improvements construction can commence, and that lessee improvements could be constructed concurrently with the site improvements. Since the heavy construction and the public site improvements construction phases can be allowed to overlap, the lessee improvements can be completed much sooner than in most projects. It appears highly probable at this time that a certain overlap can occur because the public site improvements construction does not depend upon the completion of major portions of the heavy construction.

Obtain Financial Commitments

As noted in the previous section, the project will not require local financial assistance in addition to State loans. Financial commitments from the State must be secured before the project can proceed into the construction stages.

Complete Engineering Design, Environmental Impact Statement and Public Hearings

The first major step to be undertaken to implement the proposed harbor development is to initiate the engineering design work. Completion of the design is prerequisite to advertising for construction bids. This design effort will require a minimum of six months, and should be begun as soon as possible. In any event, it should be begun no later than September 1973 if the projected harbor completion date is to be realized. This effort will include the completion of necessary survey work, the preparation of engineering plans and specifications, completion of the environmental impact studies and public agency approvals.

Award Construction Contract for Heavy Construction

Upon completion of the necessary engineering design work, the City should move rapidly to advertise for construction bids and to award the contract to perform the construction work. This is scheduled to occur in September 1974.

Construct Channel Basin and Drainage

The contract award will result in dredging the channel and basin, the construction of bulkheads and interior walls, grading and storm drainage. The construction schedule calls for the completion of this portion of the project by February 1975.

Complete Engineering Design for Utilities, Roads, Etc.

Design of the utilities, roads, landscaping, paving, and other aspects of surface improvement which are to be constructed by the City should be undertaken before channel and basin are prepared. This will permit the construction of roads and utilities to begin before the completion of the basin and channel.

Award Contract for Site Improvements

Acceptance of bids and the award of contract for the construction of the utilities, roads, pavement, landscaping, and other surface improvements is also essential in September 1974 if continuous construction is to be accomplished.

Construct Site Improvements

Construction of these surface improvements could involve several contractors who cannot work concurrently, and adequate time for the completion of each aspect of the construction must be allowed. A period of ten months is programmed, and completion of this phase of the development is scheduled for June of 1975.

Preparation of Lease Offer Criteria and Documents

Preparation of design criteria and improvement standards to be imposed on lessees should begin during the development of the engineering plans for public construction. This effort should include the preparation of descriptive material for use in soliciting and informing prospective lessees of the leases to be made available. The importance of this effort is discussed in the "Leasing program" section. The following documents should be prepared; these also are described in greater detail in the "leasing program" section.

1. A document briefly explaining the general scope of the marina project, the time schedule, and the facilities to be offered, the general basis for award of leases, and other relevant information regarding this submission of bids.
2. A document instructing potential bidders on the submission of bids for particular leases.

3. A document which becomes the bid form and which includes a legal description of the parcel to be leased and the exact uses to be permitted on that parcel, the design criteria and minimum standards for lessee construction, the time schedule for development of lease improvements, the minimum rents to be paid, and other relevant conditions. This is submitted by the prospective lessee together with his financial statements and bid deposit.

Accept Bids and Award Leases

A minimum period of three months is required to accept lease bids and to award leases to the selected lessees. The award date must allow sufficient time for lessees to plan, design, and to arrange financing for leasehold improvements; the awards should be no later than March 1975.

Construction of Lessee Improvements

The construction of lessee improvements can begin in March 1975. All lessee improvements are programmed to be completed and in operation by July 1977, with the exception of one restaurant to be completed in 1978.

MAJOR LEASING PROGRAM CONSIDERATIONS

A strong leasing program is imperative to both the short-term and long-term successful development of new marina facilities. The income estimates developed in the financial analysis, although conservative, depend on the city's advance planning for the procurement of capable lessees who will be ready to construct the required facilities as soon as access is available -- lessees with management ability to maximize the income potential of the project.

The implementation of a leasing program should provide for the following considerations:

- (1) designating an Administrator or Manager and a Design Review Committee;
- (2) reviewing harbor leasing programs generally for the purpose of assisting the City in decision-making with regard to leasing of parcels;

- (3) ordering the design committee, the engineering counsel, the legal counsel and financial counsel to establish specific criteria for leaseholds well in advance of bidding;
- (4) preparing adequate material for informing prospective lessees of the opportunity at the marina and inviting them to bid on lease parcels;
- (5) seeking out and contacting prospective lessees whose experience and management success is known;
- (6) establishing a standard bidding document that will develop adequate information about each bidder to facilitate selection of lessees; and finally,
- (7) developing a leasing schedule which will insure having tenants ready to start construction and operation of facilities in accordance with the City's schedule.

These and other factors are discussed in more detail in the following text.

Department Administrator or Project Manager

The success of the implementation program will depend to a great extent on the degree of attention to the many complex details with which the City will become involved in the course of the development. A capable administrator will be essential once the marina development begins. As a full time City employee, he will assure that the City's policies are being implemented and the City's interests protected during the construction and leasing programs. He may also have other functions within the City, particularly after completion of the project. He would be only generally responsible for day-to-day operations at the marina and should not be expected to function as harbor master as well as administrator or project manager.

Selection of a person who has experience in successful harbor or marine facilities, especially those involving lease operations, could be beneficial in terms of the knowledge of prospective lessees and knowledge of the problems to be overcome in a leasing program. However, since he will be assisted by the City's legal counsel, consultants and the Design Committee, his primary capability should be in management rather than the technical aspects of supervising construction, preparing lease documents, or reviewing lessee improvement plans.

Experience has indicated that unless the agency responsible for the marina is aggressive and assumes the initiative in dealing with lessees, the agency (whether city, county, district or other) will find itself continually reacting to lessee proposals. The establishment of good design criteria and minimum standards prior to entering into lease agreements will partially obviate this problem. In addition, an administrator can assist by assuring that lease or option agreements are being met on a continuing basis.

Design Review Committee

The importance of the maintenance of the environmental character and the quality of construction within the project area is a City responsibility which must be stressed. Where most of the buildings are to be constructed by lessee developers, a conscious and careful supervision of improvements proposed by lessees is essential. Every lessee must be required to maintain an established level of construction and environmental quality if the City is to realize a successful, well-developed harbor.

A Design Review Committee is recommended as the means for maintaining consistent adherence to the design standards established for the facilities, and to assure a continuity between adjacent improvements installed by different lessees. This Committee should have the authority to review, evaluate, approve, modify, or disapprove all aspects of the design and construction of facilities proposed within the project area.

The Design Review Committee is viewed as a technical committee not as an official policy committee. As such, several members of the Design Review Committee can be specialists who provide consulting services to the City. Membership on the Design Review Committee should consist of the following persons:

The Harbor Manager - Administrator

This is a position which does not exist at the present time, but which would be required as the proposed improvements move into the construction phase. As a staff representative of the City, his participation in the Design Review Committee is essential.

Park and Recreation Commission Representative

One of the members of the Park and Recreation Commission should be selected to serve on the Design Review Committee in order to

maintain the liaison between the Design Review Committee and the Commission.

The City's Legal Counsel

In the early stages of lessee development, the participation by the City's legal counsel in the Design Review Committee is desirable. As the functions of the Design Review Board become more routine and the review of all major improvements has been completed, the counsel may be required to participate only on certain occasions.

The City's Architect/Engineer/Economist

The participation by the City's selected architect is recommended to assure that proposed improvements conform to the architectural design policies established by the City for the marina.

The City's engineer should serve on the Design Review Committee to assure that any proposed improvements are in conformance with the standards of improvements established as City policy and to assure that due consideration is given to the operational and public safety aspects of the proposed improvement.

The City's financial and economic advisor may on occasion provide useful direction to the Design Review Committee, especially when conditions imposed by the City for the Design Review Committee could affect the economic operation of the facility. The economist may also advise as to when the modification or expansion of facilities proposed by a lessee may have an impact on the economic operation of other lessee activities.

Review of all matters by the entire Design Review Committee will not always be required. However, a majority of the Committee should act affirmatively on a matter submitted for review, prior to the submission of that matter to the Park and Recreation Commission.

Formation of the Design Review Committee should occur prior to the time of the preparation of the lease bid invitations in order that the Committee may participate in the development of the lessee design standards. The Committee's major responsibility will occur with the review of lessee improvements proposals and plans. After this major review effort is complete the Design

Review Committee will need to function only on an occasional basis when lessee or City improvement proposals occur. The Administrator or Project Manager should probably act as the Chairman of the Committee and should notify members of the Committee when their attendance at a meeting is required.

Reviewing Harbor Leasing Programs

The Administrator or Project Manager should be familiar with leasing policies and programs which have been proven at other successful harbors (or other public facilities leased for commercial operation). Studies of leasing of public properties and leasing programs at various harbors are the basis of the following suggestions and recommendations for leasing at the proposed Foster City Marina.

Master Lease. The most efficient development of leaseholds usually occurs through the use of a master lease for several related functions. A master lessee has a larger site and can coordinate the design, construction, and development of various facilities at the site and make more intense use of the land and water area. This should result in higher income productivity of the leasehold for both the lessee and the City.

Persons or corporations who can qualify as master lessees are usually more experienced in management and operation of facilities, have established financial sources, complete supporting services for planning, design, accounting, and operations, and frequently have trained personnel available from other operations to move into the initial operation of new facilities. A master lessee, with greater financial investment than small operators, has an obligation to himself and his financial backers to be successful. At the same time, use of master leases reduces the administrative detail work because the City is dealing with one lessee rather than many.

However, there are instances of smaller lessees who have been extremely successful with specific operations at some harbors. The qualifications for performance by the lessee, whether master or individual, must be a major consideration in leasing. If a master lessee does not have experience in all of the uses

required on the leasehold, the inclusion of management qualifications for specific uses is essential.

Option Contract. Some property administrators have had difficulty getting lessees to construct required facilities on schedule. The problem results from difficulties in obtaining financing, to a desire to hold land for future use, and possibly to lessee objectives to minimize operations during the early years of low potential. The option agreement has been used successfully by some harbors to insure the development of planned facilities according to the schedule specified by the lessor. The essence of the option agreement is a document specifying the terms for the final lease which will become effective if the option is exercised. The cost of the option is the lessee's bid price above a specified acceptable minimum. The term of the option may be from three to nine months, an interval which is adequate for obtaining financing, preparing the design and development plan and arranging for construction, and contracting with subtenants. If the option is not exercised, the option payment is forfeited.

Lease Terms. The lease terms should be based primarily on the amount of investment required of the lessee to provide the required facilities at the leasehold. As a guide, the following general criteria are suggested: 35 to 50 year terms for leases requiring over \$1 million in investment; 15 to 25 years for leases requiring \$250,000 to \$1,000,000 investment; 10 years or less for leases requiring minor improvements or for operating leases or building space leases. Some leasing agencies operate on a maximum of 30 to 35 years, similar to an acceptable depreciation schedule for the type of construction required. Lease terms should ultimately be established only after consideration by the City of all factors affecting the City's interests, as well as the lessee's interests.

Renegotiation of Minimum Rent. On long term leases, it is advisable to specify a rent renegotiation period of five years throughout the lease, and to specify that rent will be renegotiated

according to a formula or guideline, such as new minimums will be 75 percent of the actual rent paid during the last three years before renegotiation or a continuation of the present minimum, whichever is greater. A provision for renegotiating minimum rent protects the lessor in the event the leasehold undergoes a period of poor management, and it gives the lessor a firm base for projecting a marina operating budget.

Performance Guarantee. A clause in the lease should provide for legal recourse and financial consideration to the City in the event of lessee's failure to perform. The terms of performance should be clearly understood and the penalties for failure clearly defined. Attention to this detail will facilitate the administration of leases.

Lessee Promotional Effort. A concerted and continuous effort by the lessees and the City will be needed to promote the harbor and its facilities to boaters and the general public. Participation by lessees in an association to promote the harbor, sponsor harbor events, and to prepare and distribute promotional literature, could be required as a condition of leasing. A minimum financial consideration (such as 0.2 percent of gross revenue or some other equitable sum) might be specified so that the association will have funds for their promotional work.

Leasing Criteria

Standards and procedures for leasing should conform to pre-determined requirements so that prospective lessees will have maximum information available regarding their obligations and limitations when consideration to lease is initiated. The criteria for each review (Design Committee, Commission, etc.) should be incorporated into the leasing information given to prospective bidders.

Preparation of Information for and Invitation to Bidders

Mimeographed or printed material describing the marina plan, the location of facilities, the parcels which will be leased, and the general procedure for leasing should be made available well in advance of the bid dates so that inquiries can be answered and contacts with prospective lessees can be

arranged to encourage bidding.

Leasing Effort

Harbor administrators and other property managers stress the importance of developing enough prospective lessees to permit a choice of lessees based on qualifications. Consequently, the Administrator or Project Manager will need to exert substantial effort to seek publicity for the marina development plan and the opportunities for leasing, make direct contacts with prospective lessees, make contacts to find prospective lessees through other sources such as financial advisors, other harbor administrators, other leasing agencies, and through entrepreneurs in the field related to the leaseholds.

Standard Leasing Document (s)

A standard document which gives every bidder the same information, and similarly requires comparable data from each bidder, will facilitate bidding and the final evaluation and selection of lease tenants. In general the lease document (s) will cover the leasing conditions which will apply to all leaseholds, will describe the specific parcels and state the permitted uses, and will list the information to be submitted by the bidder. The general information which should be included in the three lease documents (described earlier) is as follows:

General and Specific Lease Conditions

Description and size of leasehold

Term of lease

Purpose or use of property

Improvements required

Rental: payments, basis, security, renegotiation period, etc.

Operation requirements

Records and accounts

Maintenance

Tax Responsibility

Indemnity and insurance

Eminent domain

Subleasing, assignment, successor

Default, options, etc.

The documents also provide for submission of certain information by the bidder. Generally this includes:

Information Required of Bidder

Name, address, phone number

Parcel designation for which proposal is applicable

Option price offered

Deposit or security

Proposer's organizational structure (corporation, partnership,
or individual) and history of organization

Current financial statement

Method of financing proposed development

Method of operating proposed development

Estimated construction cost of facilities

Estimated gross receipts for specific periods

(such as first five years and second five years)

Experience statement

References

Other information proposer feels will be helpful for
evaluating bid

Leasing Schedule

As soon as the design work for the marina is completed (June 1974), the leasing program should be initiated so that all steps up to the selection of lessees will be completed on or before December 1974. This will provide approximately four months for lessee selection and will enable the selected lessees to complete final planning, obtain approvals, and select their contractors to begin construction in 1975. If the basic construction program proceeds as suggested, the leasing program must also be conducted accordingly. Any delays in the leasing schedule will postpone income to the project beyond the dates scheduled in the financial analysis. Significant delays, once the construction funds have been borrowed, could result in increased interest costs and reduced revenue to the project.

SUPPLEMENTAL REPORT

to the June 1973

FOSTER CITY MARINA FEASIBILITY STUDY

Supplemental Report Prepared in September 1973

by

WILLIAMS-KUEBELBECK & ASSOCIATES, INC.

Market Study, Financial Analysis and Implementation Program

KAISER ENGINEERS

Preliminary Engineering Design and Cost Estimates

ROYSTON, HANAMOTO, BECK & ABEY

Site Planning

INTRODUCTION

This supplement to the FOSTER CITY MARINA FEASIBILITY STUDY ^{1/} has been prepared as a result of comment by the U. S. Department of the Interior, Bureau of Outdoor Recreation. As we understand the BOR's position, the area of land required in the Marina Plan for commercial-recreation facilities and parking is excessive with regard to BOR policy on the use of land acquired in part with BOR funds.

The agreement between the City and BOR for funds to purchase the site permitted the development of a marina and "concessions". The number and type of these concessions was not specified, and to our knowledge, BOR does not have a precise definition of the term concession as it applies to this project.

The purpose of this supplement is to present a revised plan for the marina, and to evaluate the financial feasibility in accordance with criteria of the California Department of Navigation and Ocean Development for small craft harbor construction loans. The major modifications to the original plan include the elimination of the yacht club building and one of the large restaurants, and a condensation of the remaining land uses and parking areas.

The following pages present a description of the revisions and an evaluation of their effect on the proposed development program. Our comments on the BOR policies, as we understand their application to this project, are as follows:

- . BOR policy opposing the construction of a yacht club on land acquired in part with BOR funds appears to be arbitrary and overlooks the basic nature of a yacht club as a recreational facility. Membership in the yacht club would be open to any applicant. The club would be "private" only in the sense that use of its facilities would be limited to members of this club and members of all other

^{1/} FOSTER CITY MARINA FEASIBILITY STUDY, June 1973, prepared by Williams-Kuebelbeck & Associates, Inc., Kaiser Engineers and Royston, Hanamoto, Bech & Abey.

yacht clubs under the typical "reciprocal privileges" agreement among yacht clubs. Admission to membership in the yacht club would require approval of existing members. The club's lease agreement with the City would prohibit discriminating against applicants on the basis of race, color, religion or sex.

The primary activities of the club would be recreational - sponsoring races, providing boating and sailing instruction, sponsoring a Sea Scout base, and organizing social events. It is unrealistic to expect a club to provide these activities unless the club can define its membership requirements, enforce by-laws and collect dues from an identifiable body of members. The alternative to a yacht club is a totally public activity program supported by the City's Park and Recreation budget, utilizing a clubhouse or recreation center funded by the City.

The BOR's request that the yacht club be deleted from the Marina Plan therefore places the financial burden of certain types of boating recreation totally on the City.

The elimination of one of the three dinner restaurants from the development plan will not seriously affect the project's income and ability to repay State marina construction loans. Further deletions of income producing concessions could reduce the project's financial feasibility to a point at which the State would not provide construction loans. As an alternative, berth rental fees could be set high enough to cover all debt service and operating costs, but it is doubtful that boat owners would pay the higher rates.

The State of California through the Department of Navigation and Ocean Development, has designed its marina construction loan program to function similar to a revenue bond issue. Loans are made to local public agencies for land acquisition and construction of marina facilities. These loans are repaid out of the income from berth rentals and lease income from concessions. Concessions at marinas in California have included apartments and office buildings, as well as restaurants and boater services. Where income from berth rentals and concessions has not been sufficient to repay the State loans, most local public agencies have subsidized their marina projects through the general fund. This practice has encountered serious voter opposition, and at present, few local agencies are willing to undertake marina projects unless projected revenues are in excess of all acquisition, operating and capital costs. The State is also reluctant to grant construction loans unless the project has the potential to produce a small surplus for contingencies.

We suggest that the BOR review its policies regarding the construction of restaurants in parks and recreational areas. For many people, especially those who do not participate in active recreation, dining in an attractive setting is an extremely enjoyable form of recreation. A second and equally important consideration is the income produced by the lease of public land. This income helps to offset the costs of purchasing the land. Furthermore, the property taxes on the leased land and improvements offset tax losses incurred when the land is removed from the tax rolls. It is our conclusion that the development of privately operated commercial recreation facilities on public land is an appropriate method

of reducing the taxpayers' cost of acquiring the park land and providing public recreation.

Our final comment concerns the amount of land used for parking cars. We recognize the vast acreage of land consumed because of our dependence on the automobile. However, until a realistic alternative is discovered, we must either provide parking or reduce the ability of the public to enjoy recreational activities. The Marina Plan must either contain adequate parking or the boaters and public will not be served by the project.

LAND REQUIREMENTS

The minimum land requirements for marina parking, commercial-recreational structures and their parking have been well established through the development of numerous public marinas in California in the past decade. The Department of Navigation and Ocean Development has requested a standard minimum parking ratio of .75 spaces per boat berth. Although this standard is flexible, a reduction of parking area tends to cause congestion and double-parking on weekends and holidays when boat owners invite guests. The DNOD ratio may be less than adequate if parking lots are open to the public and the marina is in an attractive public park area.

Parking needs for the small boat launch ramp have been estimated at 25 car and trailer spaces for each launch ramp lane. A total of 50 spaces for the two-lane ramp have been included in the Marina Plan. This capacity is adequate for daily use by fishermen and day sailors. However, on weekends and holidays, and when small boat regattas are scheduled, trailers may have to be parked on the grass surrounding the parking area.

Land requirements for the haul-out facility, chandlery, coffee shop, boat sales office and restaurants have been estimated at the minimum required to attract private operators to lease these parcels. Each activity requires parking for employees as well as customers. For example, a restaurant will require parking for at least 20 employees' cars in addition to patrons' cars.

Peak times for these activities coincide with the peak of boating and visitor activity on Saturdays and Sundays. On weekdays, there is little difficulty involved in sharing parking areas among all activities. Thus the area paved for parking is excessive on average weekdays and barely adequate when the public desires to visit and use the recreation facilities.

The following list of land uses and land area requirements is estimated as the minimum required for a successful leasing program and a well-designed project. Small reductions in land areas may be achieved through careful planning for a sharing of parking between certain uses such as the chandlery and boat sales office, or the coffee shop and a restaurant. Significant reductions could have a negative effect on private lessees' interest in attempting to develop the parcels. The chandlery, boat sales, coffee shop, launch ramp and haul-out facility are essential if the project is to serve the boaters. As will be noted in the next section, income from the two restaurants is needed to avoid subsidizing the project out of the City's general fund.

Estimated Minimum Land Requirements: Foster City Marina Plan

	<u>Acres</u>
Parking for Boat Berths	
470 Berths x .75 space per berth = 352 spaces	
@ 350 sq. ft. per space	2.83
Chandlery, Bait & Tackle Shop	
3,000 sq. ft. building	
10 parking spaces @ 350 sq. ft.	.15
Coffee Shop	
2,500 sq. ft. building	
50 parking spaces @ 350 sq. ft.	.45
Boat Sales Office	
500 sq. ft. building	
10 parking spaces @ 350 sq. ft.	.10
Restaurants	
2 buildings @ 10,000 sq. ft. each	
200 parking spaces @ 350 sq. ft.	2.07
Launch Ramp	
50 car and trailer spaces @ 600 sq. ft.	.70
Haul-Out Facility	.12
Harbormaster's Office	
Office on second floor of restaurant	
5 parking spaces @ 350 sq. ft.	<u>.04</u>
TOTAL ACREAGE	6.46

FINANCIAL CONSIDERATIONS

In evaluating the financial implications of a modification to the Marina Plan, we have changed two elements of the original financial analysis. These are the elimination of the yacht club and the third restaurant. The City has indicated to DNOD that the City will construct and operate the marina and lease the other parcels to private operators. This alternative is therefore the only approach considered here. The original assumptions with regard to market demand, timing of development and income have been retained.

Table 37 (revised) shows the calculation of income from the two restaurants remaining in the Marina Plan. The only modification from the original feasibility study is the elimination of a third restaurant.

Table 38 (revised) shows the projected income to the City after elimination of the third restaurant and the yacht club. Income from the yacht club had been estimated at a constant \$3,000 per year.

The result of eliminating income from the yacht club and one restaurant is shown in the lower portion of Table 38 (Revised) in comparison with the original projection of annual surplus. The effect of the income reduction is to reduce the project's annual surplus significantly in fiscal years 1978-79 through 1983-84.

Although the project remains financially feasible, the annual surplus is reduced to a dangerously low level for two reasons. First, the construction cost estimates are preliminary and could increase as the project proceeds through the final design phases. A relatively small increase in the capital construction costs could absorb the surplus. Second, if the projected income from any of the sources is delayed or is less than that projected, the surplus will not be realized.

It is also important to note that the projected surplus is essential to cover additional loans in the future for major maintenance, replacement of boat slips or maintenance dredging of the marina basin and slough. While the State Loan program does not require sinking fund accounts for these major

Table 37 (Revised)

INCOME FROM RESTAURANTS

	<u>1976-77</u>	<u>1977-78</u>	<u>1978-79</u>
	\$	\$	\$
<u>Restaurant #1: 250 Seats</u>			
\$2,500 per seat	625,000		
\$3,000 per seat		750,000	750,000
<u>Restaurant #2: 300 Seats</u>			
\$2,500 per seat		750,000	
\$3,000 per seat	<u> </u>	<u> </u>	<u>900,000</u>
Gross Income (1973 Dollars)	625,000	1,500,000	1,650,000
Escalalated at 3.0% per year	683,000	1,688,000	1,913,000
Income to City @ 2.5% of			
Gross	17,100	42,200	47,800

Source: Table 37 of Feasibility Study report, June 1973.

Revised to reflect reduced income due to elimination of Restaurant #3.

Table 38 (Revised)

INCOME AND OPERATING EXPENSE SUMMARY

<u>1975-76</u>	<u>1976-77</u>	<u>1977-78</u>	<u>1978-79</u>	<u>1979-80</u>	<u>1980-81</u>	<u>1981-82</u>	<u>1982-83</u>	<u>1983-84</u>	<u>1984-85</u>
\$	\$	\$	\$	\$	\$	\$	\$	\$	\$

FULL OPERATION BY CITY ^{1/}GROSS INCOME

Boat Slips	54,000	162,000	243,000	296,100	296,100	296,100	338,400	338,400	338,400	380,700
Fuel Dock	300	900	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400
Ship Chandlery	-	4,900	7,600	8,200	8,400	8,700	8,900	9,200	9,500	9,800
Boat Sales	1,100	3,300	5,100	5,400	5,600	5,800	6,000	6,100	6,300	6,500
Haul-Out Facilities	-	1,100	3,400	5,200	5,600	5,800	6,000	6,100	6,300	6,500
Restaurants ^{2/}	-	17,100	42,200	47,800	49,200	50,700	52,200	53,800	55,400	57,100
Coffee Shop	2,100	2,200	2,300	2,300	2,400	2,500	2,500	2,600	2,700	2,800

^{1/} Total Income	57,500	191,500	305,000	366,400	368,700	371,000	415,400	417,600	420,000	464,800
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OPERATING EXPENSE	50,000	75,000	104,100	108,300	112,600	117,100	121,800	126,700	131,700	137,000
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NET INCOME AVAILABLE TO CITYFOR DEBT SERVICE

7,500	116,500	200,900	258,100	256,100	253,900	292,600	290,900	288,300	327,800
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PRINCIPAL AND INTEREST ^{3/}PAYMENTS ON:

1974-75 Loan	0	110,000	133,600	133,600	133,600	133,600	133,600	133,600	133,600	133,600
1975-76 Loan	0	0	66,400	99,800	99,800	99,800	99,800	99,800	99,800	99,800
Total	0	110,000	200,200	233,400	233,400	233,400	233,400	233,400	233,400	233,400

<u>SURPLUS</u>	7,500	6,500	900	24,700	22,700	20,500	59,200	57,500	54,900	94,400
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SURPLUS BEFORE ELIMINATION ^{3/}

OF RESTAURANT AND YACHT CLUB	7,500	6,500	3,900	45,100	43,700	42,000	82,200	80,100	78,100	118,200
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^{1/} Based on Table 38, of Feasibility Study Report, June 1973.^{2/} From Table 37 (Revised), escalated at 3.0 percent per year.^{3/} From Table 39, Feasibility Study Report, June 1973.

expenses and will make additional loans, sufficient income must be available to pay the debt service on the additional loans.

It is our conclusion that further elimination of income producing activities will seriously jeopardize the project's financial feasibility with regard to the State Loan program, and could require subsidization by the City general fund. Modification of the Marina Plan will not endanger the project's feasibility if these modifications do not increase the capital construction costs or prohibit the project from functioning as originally anticipated. Thus, a relocation of structures and parking areas would not necessarily affect the project's financial feasibility.

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